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Air Heating and Venti-
lating Interests
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SPEAKING RECENTLY BEFORE the builders' organization in Baltimore, Maryland, William M. Calder, United States Senator from New York, urged the resumption of building activities throughout the country as the proper way to stimulate business. He affirmed his conviction of the soundness of America and the certain prosperity ahead. There is no good reason why builders should refrain from getting projects under way immediately, he declared. "The building industry," he said, "is one of the most important in the Nation. It always seemed to me that it was really the most important for it has to do with the construction of homes in which our people live, the places of business in which men and women are offered an opportunity to learn a livelihood, and then too, our public buildings, churches, great art galleries and great institutions of learning and places of amusement. It always seemed to me that it was a fundamental business and the men who were engaged in it came only after those who till the soil and produce the things that keep people alive."

"It seems to me, however, at this time it would be well to recall the stirring words of John Sherman, when, while he was Secretary of the Treasury, he was asked concerning the resumption of specie payment, he replied: 'The way to resume is to resume.' I say to this audience, the way to establish business confidence again is to resume business."

"Of course, if everyone should conclude to stop the wheels of industry; if all are determined there shall be no more business until pre-war prices return, then indeed the country is facing dangerous days. But such is not the case, for underneath the surface the spirit that has carried this country through difficult times in the past is awaiting the opportunity and I am certain that before long the men of courage will master the troubles of the hour and will leave behind those who lack faith in America's future."

IT HAS BEEN WELL said that what we need today is less instructing and more reminding of things already known. Especially is this true of advertising. Everyone who pauses to consider the matter knows that advertising develops markets for commodities. It brings new customers to a store. We owe the general adoption of the comforts of civilization to publicity. Meat grinders have replaced the old-fashioned wooden chopping bowls through the influence of advertising. The wooden chopping bowl would still be in universal

use if the superior merits and efficiency of the metal meat grinder had not been convincingly set forth through the media of newspapers, magazines, trade journals, and other avenues of communication. Automatic ratchet screwdrivers are more convenient than the rigid type of screwdriver. They are easier to operate and they save time and effort. The average mechanic knows this to be the fact. But he needs to be reminded of it from time to time by means of advertising. In order to induce him to buy an automatic screwdriver it is necessary to break the hold which habit has upon him. He knows that the automatic tool is better than the rigid one, but he is used to the latter. Therefore, advertising must keep on reminding him that the automatic will make work easier for him—until desire overcomes the inertia of habit and he buys the improved tool.

ONE OF THE SUREST ways to acquire new customers is to get acquainted with the people of your community. During the past two years the community councils organized under the jurisdiction of the Council of National Defense did much good in fusing neighborhood groups into strong civic units. These units will not disintegrate. There is still work for them to do. In fact, there will always be work for them to do in fostering better citizenship and promoting social welfare. At present, an urgent task confronts them in the carrying out of which the hardware dealer should take a prominent part.

It is pointed out by the Council of National Defense that the cessation of hostilities has not concluded the war emergency. Great emergency tasks still lie before the people of America. The programs of demobilization and readjustment call for response in service from every citizen. To secure this response, it is necessary that all citizens in each community be brought together in a general community organization where each individual will come into intelligent touch with the emergency programs and the support of every individual and every agency focused thereon.

To make this response effective further requires that the work of all agencies and persons should be coordinated and welded into united action and that there should be some central general agency which can undertake directly those programs for which there is no special agency in the community. In a word, there must be a people's workshop where patriotism is turned into action and where intelligent mass action is secured through freely willed team play. This

workshop in each community is the community council. Upon the community councils the Council of National Defense now relies to do the work of the present emergency.

When the emergency programs of demobilization are a thing of the past, the need for the organization of each community will, nevertheless, endure. Each community will need organization in order that its people may come in effective working contact with the problems of the state and the nation and that the voice of the community may become articulate in regard thereto. Each community will need organization in order to develop a true community interest and responsibility that will lead to community initiative and action to meet local needs, in order that the programs of separate institutions and agencies may best be adjusted to meet the particular needs and opportunities of the individual community and in order that the welfare of the community may be safeguarded through intelligent thoroughgoing planning and not left to chance and the competition of individual agencies. Finally, this organization is needed in order to provide for every individual in the community a true place in the community life and to bring to the community as a whole a sense of fellowship and cooperation that will enrich the life of the community and make each citizen proud of his community citizenship.

PHYSICAL LAZINESS is not common nowadays. Outside of the joke books there are no merchants as lazy as Ludlam's dog that leaned his head against the wall to bark. But there is Laziness of Mind. altogether too much intellectual indolence among men of business. It is due largely to the insidious habit of letting others do one's thinking. Newspapers, magazines, law makers, preachers, and politicians are constantly adding to the world's stock of ready made opinions. Just as it is easier for the housewife to buy bread from the grocer than to prepare the dough and bake it at home, so it is less laborious for the merchant to take the ideas of others without going through the process of analyzing them and modifying them to suit the requirements of his own character and business. The laziness of mind which results from this habit is a handicap, because it weakens the faculty of judgment and lessens the power of initiative and decision.

THERE IS A VERY expressive phrase in Spanish to describe a truth whose evidence is plain and undeniable. For instance, if one were to make the statement that a man who has a wide brow with eyes below his forehead will live all the days of his life, it would be called a *verdad de Perogrullo*. Francisco de Quevedo, a Spanish poet and satirist of the sixteenth century, wrote many amusing things in the form of *verdades de Perogrullo*. A chimerical, extravagant, and ridiculous personage was Perogrullo. He has his counterpart in present-day journalism. Indeed, to a certain extent necessity compels the use of many *verdades de Perogrullo*. The basic truths of sound merchandising are so unmistakably evident that their frequent repetition in editorials reduces them almost

to sayings of Perogrullo. Yet the numerous failures of retail dealers forces the conclusion that, simple as are these truths, they are not recognized and put into practice by many merchants throughout the land.

Hence arises the need for restating them as often and in as many different phrasings as possible. No business can prosper without advertising. This is as much a *verdad de Perogrullo* as to say that when rain falls on a dusty highway the road will be muddy. Yet there are dealers who attempt to do a profitable business without advertising. Courtesy, fair treatment, and prompt attention to the wants of customers are requirements the truth of which is as evident as that he who possesses a dollar has a hundred cents in monetary value. Nevertheless, there are hardwaremen who habitually neglect these requirements as if the truth of their necessity were obscure and difficult to ascertain.

BOTH THE RETAILER and the manufacturer would be benefited by the elimination of unnecessary styles and finishes in hardware. Multiplying the styles of a commodity works a hardship upon the dealer who bases his claim to good will upon service from a complete stock of goods. He is obliged to carry on his shelves many types of the same article in order to meet occasional calls for a particular type. In the matter of cutlery, for example, there is a needless and wasteful variety. It is known that there are 1,400 odd lines of knives, many of them heavily advertised. It is merely guesswork to choose an average assortment out of that number. The result is that the dealer is left at the end of the year with a lot of broken lines on his shelves. The cutlery market is swamped with patterns. Therefore, manufacturers who are reducing their styles to a reasonable variety deserve the hearty support of retailers everywhere.

SWAMI VIVEKANANDA was a Hindu sage who visited the United States at the time of the Chicago World's Fair. He was deeply versed in the lore of the Orient. In one of his lectures delivered in this country, he made a statement somewhat startling in its novelty. He said to each person in his audience: *You are the center of the universe*. The assertion is true of every individual. No one can think of the sun and the moon and the far-flung stars except with his own brain. No one can direct his thoughts toward sky and hill and plain from where another man stands. He can not think through that other man's brain.

Applying this fact to the business of retailing commodities, every dealer is the center of his own business. Philosophers may explain to him the laws which govern the process of successful merchandising. Experts may freely place at his disposal the wealth of their own experience. The collective wisdom of his fellow retailers may be conveyed to him through the medium of his trade association. Trade journals may diligently gather for him data concerning improved methods of accounting and salesmanship. But he must assimilate all such material into the substance of his own thoughts before he can use it to the ad-

Needless Lines of Cutlery.

The Dealer Must Think for Himself.

Truth of Perogrullo

vantage of his business. Only that knowledge which he centralizes in himself can do him any good. Other men may furnish the details and methods, but he must do his own thinking in order to transmute them into profits for his store.

RANDOM NOTES AND SKETCHES.

By Sidney Arnold.

In many ways Ralph Waldo Emerson was a beacon light to those whose paths ran through gloomy discouragement. In his *Works and Days* he condensed into a single sentence the wisdom of all the philosophies, when he said: "Write it on your heart that every day is the best day in the year."

* * *

Tom Usher of Russell and Erwin Manufacturing Company, Chicago, Illinois, believes in getting down to brass tacks with the least possible amount of circumlocution. He hates long-winded sentences and beating about the bush. That's the reason why he dislikes legal language. This is the way he explains his point of view:

If a man were to give another an orange he would simply say: "I give you this orange." But when the transaction is intrusted to a lawyer to put in writing he adopts this form: "I hereby give and convey to you, all and singular, my estate and interests, right, title, claim and advantages of and in said orange, together with all its rind, juice, pulp and pips, and all rights and advantages therein, with full power to bite, cut, suck and otherwise eat the same or give the same away with, or without the rind, skin, juice, pulp or pips, anything hereinbefore or hereinafter or in any other deed or deeds, instrument or instruments of whatever nature or kind soever to the contrary in any wise notwithstanding."

* * *

J. C. Beggs of the Bemis and Call Hardware Company, Springfield, Massachusetts, says that the secret of success is in going directly to one's object rather than in traveling toward it by roundabout ways. He tells this story to illustrate the point:

Farmer Turnipson had brought his young son David to the city to see the sights and toward the end of a long day was dragging his fourteen stone up the steps of the great monument. Long before they reached the top the father was regretting that he had allowed his son to persuade him to undertake such a tiring journey.

"Look, father!" exclaimed the boy when they had at last reached the top. "Isn't it a grand sight down there?"

"Well," puffed the elder Turnipson, "if it's so grand down there what in the name of that's wonderful did you bring me up here for?"

* * *

F. C. West is advertising manager of Richards-Wilcox Manufacturing Company, Aurora, Illinois. He knows more funny stories than a United States senator. His publicity has vigor and personality because he does not allow himself to become too serious and, therefore, drift toward pessimism. Here is one of his stories which I enjoy:

In a western town there lived a man who was so

noted for his conversational abilities that his acquaintances avoided giving him unnecessary opportunities to talk. One cold morning he rode up to a hotel in the neighborhood just as the guests were finishing breakfast. He walked in, saluted the landlord in his usual loud tones, and declared that he was so cold that he could scarcely talk. Just then a nervous traveler who was present stepped up to the landlord and, taking him by the coat, said: "Have my bill brought as soon as possible." "What's the matter, my dear sir?" inquired the landlord. "Has anything happened?" "Nothing, nothing! Only I want to get away from here before that man thaws."

* * *

Every business man should cultivate the faculty of saying the right thing at the right time, declares my friend Williard G. Wise of the Wise Furnace Company, Akron, Ohio. He cites a good example of the right words at the right time in this incident:

John Henry was greatly enamored of a charming girl named Edythe Estelle and eventually he reached the proposing point.

"Dearest," he softly murmured one gentle moon light-night, "I love you devotedly—I have always loved you, and I beg the privilege of laying my fortune at your feet."

"Your fortune!" exclaimed Edythe Estelle, showing considerable surprise. "I didn't know that you had a fortune."

"It isn't much of a fortune, dearest," coolly admitted John Henry, "but beside those tiny feet of yours it will look like a real Rockefeller lump."

* * *

Merchandising is an intensely personal transaction. The big successes have always come through a process of institutionalizing the character, honesty, and reliability of the merchant himself. Wanamaker, Marshall Field, Lipton, Tiffany won their way to eminence because they learned how to sell first their own personality to their customers and thereafter quality in goods to match their own integrity. Berton Braley puts this into verse as follows:

You Must "Sell" Yourself.

Life is a "selling problem," that is all;
And every man is his own line of goods;
And what the price is, big or very small
Is simply up to him. For though the woods
Are full of buyers for his sort of stock
He's got to learn the way to sell himself
Oh he'll discover, with a cruel shock,
That he's a marked-down remnant on the shelf.

So to begin with he must try to be
An article of value, sound and fair;
For if he isn't—take this straight from me—
He'll find the market sluggish everywhere.
But, having worth, he must let buyers know
He's on the market to supply their need,
He's got to learn to make his value show
So plainly that whoever runs may read.

That doesn't mean that he must boast and shout
His own high quality; but it *does* mean
That he must make it clear, beyond a doubt,
By pep and push, that he is on the scene.
He mustn't miss a chance to prove his worth
And make his merit patent to men's eyes;
The chaps who get the highest price on earth
Are those who have the goods—and Advertise.

So watch your opportunities, and dwell
Upon the job your whole existence through,
Yourself is all the goods you have to sell
And what you get is wholly up to you!

UP TO THE MINUTE NEWS SIFTINGS

INTER-RACIAL COUNCIL HELPS MAKE BETTER WORKERS AND CITIZENS.

It is estimated that a million foreign born men will leave America as soon as the bars are let down.

Why do they want to leave this country? It is claimed that the development of new republics in Europe has unsettled the belief that America is the "land of promise" and that millions of immigrants feel renewed interest in their former homes, and indifference toward this country.

Is this true? It has been stated that the savings of the foreign-born go back to Europe in a steady stream and that little is done to check this drain upon our resources. To what extent is this correct? What effect will all this have upon American industry? And what are we going to do about it?

Questions such as these are of vital importance to the leaders of American commerce, industry and business. They are of interest to every American, but to the employer of labor and the financial backers of industry they are of supreme importance.

It was in order to study and act upon the facts about the foreign born in America that the Inter-Racial Council, of which Coleman du Pont is chairman, was formed recently in New York. The assemblage was typical of America, for it included men of distinction in finance, industry and commerce; men who lead organized labor and others eminent in science, education or statesmanship, while the foreign born living in the United States had spokesmen of their own race to voice their views and express their aspirations. In this period of the world's progress it goes without saying that women as well as men were given places of responsibility in the conference.

If this country is to pass through a sane reconstruction period, without violence, anarchy or civil strife, it will be necessary to get facts like the following into our consciousness, and then to act upon them with intelligence and justice. In America we have 33 million foreign born or of foreign parentage. We have 38 races, speaking as many languages. Many of them are hostile to each other and indifferent to America. When the war began, it was discovered that three million persons here did not speak our language and six million were without American contacts, or quite out of touch with the land they live in. There are 1,146 foreign language papers, 300 racial organizations of national scope and such local organizations number 23,000. We have foreign colonies in our cities and industrial towns and a general policy of indifference or worse toward the average foreign laborer, leaving him to the mercy of slum landlords, labor exploiters and swindlers of all sorts. Such are the facts.

Whether we enter a League of Nations or not, our problems are henceforth inter-racial, and it is time for

the business man to enlarge his horizon accordingly. The Inter-Racial Council is the beginning of this new movement.

Its program is clear cut and practical; first, the immigrant is to have every inducement to acquire the English language and learn what America stands for; its ideals, its form of government, its customs, its history and literature. Only by such elementary education in Americanism can the foreign born become one of us.

Second, the immigrant is to receive the same fair treatment by employers as is accorded the native born worker able to protect himself. No exploitation of immigrant labor, but friendly coöperation must be the future course, and the foreign born must have this policy made evident both by words and deeds. The suppression of racial customs or language is not contemplated, for the foreigner brings us much that is desirable in the culture of the Old World.

Third, the promotion of harmonious relations between the various racial groups in America, so that the foreign groups here may establish friendly contact with each other as well as with native Americans.

What this means on a national scale can be understood by the application of this principle to industry. In a shop employing about 500 workers it is the policy of the proprietor to place his operatives in such a way that there shall be no cliques or sets based on race. Italians, Jews, Poles and Russians are scattered among native Americans, Irish and French. Only English is spoken during working hours, and courteous English at that. The result is an unusually harmonious shop, with no hostile groups trying to stir up trouble with the others.

That *should* be the condition in the United States today, instead of the present discord of racial groups and foreign colonies, which are a fertile field for the growth of theories opposed to American democracy.

It is proposed that the United States government shall take a hand in this work, under direction of the able Secretary of the Interior, Franklin K. Lane. In a bill presented to Congress this session, the education of native illiterates, of persons unable to understand the English language and of other resident persons of foreign birth is proposed, and an annual appropriation of twelve and a half million dollars is asked for to carry on this important work.

The motive of this bill is expressed in Secretary Lane's recent address in New York:

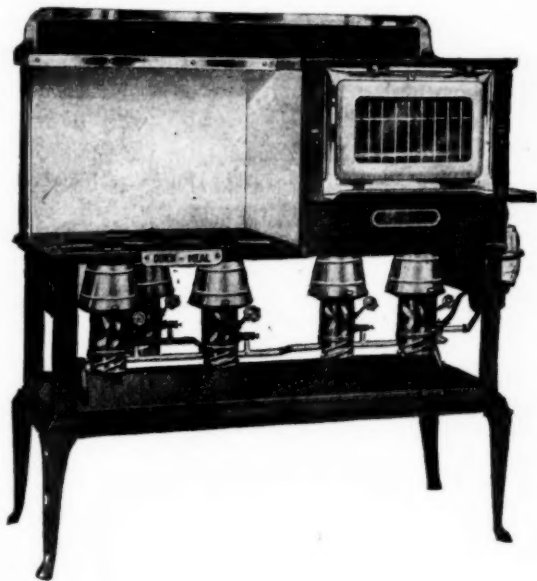
"Congress will be asked to help and all the states will be asked to coöperate to kill illiteracy in the United States, whether it is among the children or among the grown-ups, and I want you to help.

"We want to interpret America in terms of fairness, of fair play, of the square deal. We want to interpret America in healthier babies that have enough

milk to drink. We want to interpret America in boys and girls that can read and in men and women that can read, in better housing conditions and wages, and hours that will give an opportunity to a man to know his family and live and support them like a man without apology."

HAS A SIMPLE BLUE FLAME WICK.

Beauty, durability, and efficiency are combined in the "Quick Meal" Oil Stove, shown in the accompanying illustration and made by the Ringen Stove Company, Division American Stove Company, St. Louis, Missouri. The chief feature of this oil stove is the blue flame wick which is said to be simple and easy to replace. The burner chimneys are made of porcelain enameled steel which is easy to clean and prevents rusting. The stove is furnished with glass founts. The Company states that after years of experimenting it has perfected an enamel that will stand all tests of



"Quick Meal" Oil Stove, Made by Ringen Stove Company, Division of American Stove Company, St. Louis, Missouri.

wear and tear. It is guaranteed against cracking or scaling which is usually caused by the expansion and contraction of metals. In the "Quick Meal" oil stove, there are steel corner tubes which hold the sides and front together to allow for this expansion and contraction. The top and bottom are held in place by long rods which pass through these tubes and eliminate the necessity of rivet heads. The oven and boiler doors are not balanced by a spring but by a weight connecting with the door hinge by a malleable iron arm. It works in the flue and when the door is closed, the weight is out of the way. Dealers should address the Ringen Stove Company, Division American Stove Company, 825 Chouteau Avenue, St. Louis, Missouri, and secure further particulars.

EASTERN STOVE TRADE IMPROVES.

Increased sales of gas ranges, both at wholesale and retail, featured the stove business last week, according to the *Public Ledger* of Philadelphia, Pennsylvania. The better demands, while noticeable in spots,

has made the trade optimistic as to spring business in these goods. The gas range season, according to wholesalers, is not expected to open actively until April 1. Prices of gas ranges recently showed a slight decline at wholesale. The stove trade, in order to stimulate business, took this action, and it is believed that the lower prices are the result of more active buying. For several weeks the stove trade has been passing through a period of inactivity, and this renewed demand has encouraged the trade as to future business. Not only have sales increased, but inquiries are coming in more freely. Business is not only confined to this section of the country, but there has been a fair amount of sales to southern buyers.

Retailers are not booking far ahead as in former seasons, mostly buying goods as they require them. As retail business improves, the retailers are ordering from the wholesale trade to prevent stocks from becoming too low. It is believed that this restricted buying upon the part of the retail trade is due largely because they feel that there may be a further decline in prices and do not want to be too heavily stocked with high-priced goods. There is also a small amount of business passing in oil cook stoves, with the demand coming mostly from the South.

The wholesale stove trade is figuring on the furnishing of warm air heaters, steam and hot water boilers and gas ranges to builders, but just how much business will be obtained as a result depends upon the amount of building work that is done this spring and summer. New building work is looked upon by the stove trade to reach large proportions, and as a result a large amount of stove goods is expected to be purchased. The stove repair trade is reported as fair, but the volume of business done thus far this season has been good.

DEVELOPS IDEAS FOR NEW BUSINESS.

It used to be a sign of weakness to advertise for business. Nowadays it is a sign of weakness when there is no advertising appropriation. Every day sees new ideas adopted for creating new business. The new school of psychologists is having its run and advertising is its medium. Even advertising agents advertise now, every agent claiming that he can most successfully lure dollars from the public. Here are some ideas gleaned from recent advertisements:

They grew a lot of castor beans in Texas during the war to furnish castor oil for lubricating aeroplane motors. Now some enterprising concern is trying to develop the silk business in the Lone Star State, allowing the poor silk worms to pay their way by eating castor leaves. A manufacturer of men's underclothes went to the expense and trouble to find that women buy 90 per cent of men's underclothes and this has given the women's wear magazines all kinds of hope for getting advertising space for men's wear. A manufacturer who wanted to help the Government conserve steel perfected a substitute for steel corset ribs. Candy and soft drink manufacturers are taking the State of Michigan by storm with advertising campaigns designed to get some of the \$89,000,000 which Michigan used to spend on liquor before it went dry.

THE WEEK'S HARDWARE RECORD

Of Interest to Manufacturer, Jobber and Retailer

AMERICAN ARTISAN AND HARDWARE RECORD is the only publication containing western hardware and metal prices corrected weekly. You will find these on pages 38 to 43 inclusive.

The Weeks-Betts Hardware Company, Webb City, Missouri, has increased its capital stock from \$35,000 to \$75,000.

L. H. Hitchcock and Son, Nashville, Tennessee, has been incorporated to \$50,000 by Ellis Dite, Fred S. Thomas, James M. Ford, Mrs. Eva C. Hitchcock, Mrs. Mary H. Colcok and W. M. Colcok, Jr.

INDUSTRIAL FILM IS SHOWN AT THE MEETING OF PITTSBURGH RETAIL HARDWARE DEALERS.

Even with a span of Missouri mules you can not keep a member away from the monthly meetings of the Pittsburgh Retail Hardware Dealers' Association. The reason is plain. The meetings combine instruction and good fellowship in such attractive proportions that the duty of attending them is transformed into a pleasure. Thus the regular monthly gathering of the Association Friday evening, February 28, in Hotel Chatham, Pittsburgh, Pennsylvania, was signalized by the presentation of an industrial film showing the manufacture of sheet and tin plate. This film was recently completed for the American Sheet and Tin Plate Company. It illustrates a complete story from mining operations to finished products.

BETTER ROADS BRING MORE PROFITS TO THE HARDWARE DEALER.

It is assumed that dynamite dealers want dynamite trade. There is a way that they can make 1919 and 1920 the biggest trade years they ever had—that is, by strongly boosting good-roads movements.

Colonel Robert H. Tyndall, of the 150th Field Artillery, United States Army, writing from France, says: "There will be a couple of million real road war boosters when the war is over." He speaks in glowing terms of the splendid highways found in France, comparing them, much to our detriment, with the average highway found in the United States.

In the same article containing Colonel Tyndall's views, it was stated that undoubtedly there is a big road plan developing in this country. Chairman George C. Diehl, of the A. A. A. Good Roads Board, says: "\$100,000,000 a year appropriated by the Federal Government on a definite, tangible highway system will work wonders in the form of from 5,000 to 10,000 miles of splendid highway, partly made up of sections already sufficient in quality; partly in sections to repair; partly of sections rebuilt and partly of entirely

new construction. State and local appropriation should be encouraged and the construction of federal roads should enormously increase road expenditures. The thousands of otherwise unemployed labor can be used to excellent advantage in this way."

If this good-roads movement becomes nation-wide, it will mean the purchase and use of millions of pounds of dynamite for rock and earth blasting.

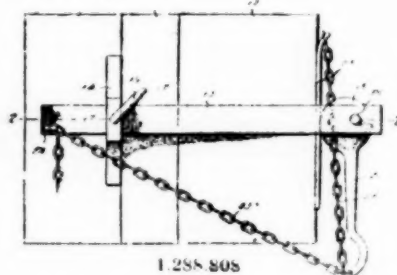
There is no necessity for selfish motives in the working out of this idea. Good roads are a benefit to the nation. The vast sums that would otherwise have been spent in destruction can beneficially be expended for highway construction, to the end that trade may be increased between rural sections and urban points. Hundreds of thousands of returning soldiers and men that have been employed in munition manufacture can be employed profitably to themselves and to the communities of which they are a part in this highway work, with the result that tradesmen will enjoy increased trade, laborers will be contented, farmers will have more accessible markets and the community as a whole will enjoy increased prosperity.

Dealers can forward this good-roads movement by presenting its advantages to bankers, public-spirited citizens, automobile owners, merchants and all others in their sections who would be benefitted by better highways; and in saying that we include almost everybody in the locality.

Therefore, it can be truthfully stated that the dealer who desires increased dynamite trade can bring it about by boosting in a business-like way the good-roads movement. Conditions for forwarding this movement have never been more favorable than at the present time.

PATENTS SAFETY DOOR FASTENER.

Mark K. Benoit, Hillhurst, Quebec, Canada, has secured United States patent rights, under number 1,288,808, for a safety door fastener described in the following:



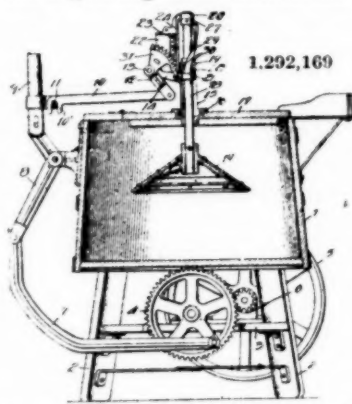
A door fastener embodying a bar adapted to be positioned across the door frame and stile of the door, an eccentrically pivoted clamping element located at one end of the bar, means also carried by the bar for engagement with the stile of the door and a flexible member carried by the eccentrically pivoted clamping element and engagement with the bar for holding the former against movement in one direction.

HARDWARE CONCERN CHANGES OWNERS.

The estate of W. K. Sharer, Carthage, Indiana, has sold the hardware and implement stock of the late owner to Charles D. Moore and Bert Sharer. The latter is a son of the late W. K. Sharer and has been associated with the business for nineteen years, during the last five of which he had complete management of its affairs. Charles D. Moore is a son-in-law of the late owner and has been connected with the store for a number of years. It is the intention of the new owners to continue the hardware and implement business at Carthage, Indiana, and to make such improvements as the constantly expanding trade requires.

GEARING IS PATENTED.

William H. Voss, Davenport, Iowa, has secured United States patent rights under Number 1,292,169, for a gearing described in the following:



In apparatus of the class described, a support, a top member mounted thereon, a vertical shaft mounted in said top member and reciprocable and oscillatable therein, a straight rack mounted on said shaft, an oscillatable sector gear adapted to reciprocate said shaft, and means for causing said shaft to oscillate as it is vertically reciprocated.

LISTS QUALITIES OF A GOOD CLERK.

From a talk with the manager of a store the other day, writes Dr. Frank Crane, in the Philadelphia Bulletin, I gathered the following items concerning what a clerk ought to be.

You can be a clerk all your life, or you can rise to something higher. Your ambitious discontent may be either wholesome or unwholesome; you can tell which it is by whether or not it makes you perform your present duties faithfully.

The way to get a better position is to fill the position you have better than any one else could fill it.

Be honest yourself, and if you are working with dishonest clerks or a dishonest employer quit your job.

A clerk's best asset is being wide-awake, and that you cannot be unless you get plenty of sleep.

Make your recreation contribute to efficiency in your work.

Watch the clock when you go to work, but not when you quit.

Be neat. Ninety per cent of store customers are women. Please them.

Be polite. Everybody likes it. Practice saying "Thank you!"

Keep busy. If you have nothing to do, find something, whether it is for you to do or not. But don't be officious.

Remember your customers' names and faces. Train yourself in this. Keep a little book.

Never argue. Never be flippant or try to be funny. Be pleasant. Don't look glum.

When a customer is dissatisfied, sympathize, don't antagonize.

Don't say "lady" or "mister." Say "madam" or "sir."

Don't talk price; talk quality.

Talk positively, not negatively. Say "What else?" not "Is that all?"

Associate, out of work hours, as much as possible with people who know more than you do.

Save something out of every bit of money you get.

Don't gamble. Invest.

Pay cash for everything you buy for your personal use.

Enjoy your friends.

Don't keep up relations with anybody who discourages you.

Read. Read systematically. If you are ever going to get on it will be because of information in your head.

Associate with people who know more than you do, who have better manners than you have, and higher ideals.

Be teachable. Be a good listener. Be open-minded.

By practice you can make your voice to have a pleasing quality. This you will find a great asset.

Converse as much as possible with those who use good English. Learn to talk interestingly without the use of slang.

Make your fellow-clerks like you by being unfailingly obliging and considerate, but don't become too familiar with them.

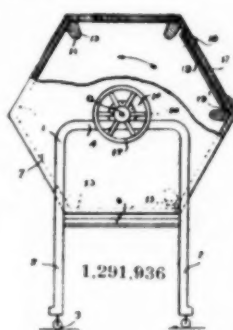
Find out and carry out your employer's wishes. Remember instructions exactly as given. Write them down in your memorandum.

Be obedient but not gushing, industrious but not officious, kind but not patronizing, positive but not egotistic, human but not weak.

Which, after all, is good advice for anybody.

PATENTS CLOTHES WASHING MACHINE.

Under number 1,291,936, United States patent rights have been granted to John Laing, Winnipeg, Manitoba, Canada, for a clothes washing machine described herewith:



The combination with a multiple sided rotatably mounted drum provided in one of the sides with a lid, of a grid-like collector pivotally secured within the interior of the drum and adjacent the side containing the lid and adapted to lie against said side and to swing inwardly to an approximately radial position, means for locking the collector in either position and an externally located hand crank for manipulating the collector.

Were it not for clouds people would not be able to appreciate sunshine.

PRINCIPLES AND EXAMPLES OF GOOD WINDOW DISPLAYS.

MAKES PROFITABLE USE OF WINDOW TRIM SUPPLIED BY CLEAN-UP AND PAINT-UP BUREAU.

The hardware retailer who deals in paints has a wealth of advertising material at his disposal. Not only do the various manufacturers help him with posters, cut-outs, window cards and booklets for circularizing the trade, but valuable assistance is also given him by the National "Clean-Up and Paint-Up" Campaign Bureau. The motto of this bureau, whose headquarters are in St. Louis, Missouri, is: "Good citizenship is good business." It teaches that cleanliness, thrift and civic pride are the essentials for homes and towns beautiful.

For ten years now this organization has been functioning in from 7,000 to 12,000 American cities and towns. To most of our readers it is thoroughly familiar—to a great many of them happily so as a result of their own participation in its successes. It has expanded from a month or so of energetic work at cleaning and painting the necessary civic buildings and homes and odd corners into a steady process of Clean Up and Paint Up which has neither (any longer) beginning nor end. In cities like Denver, and some much smaller, a permanent campaign committee is maintained, and the town is always in the quiet throes of making itself look neater and more commercially attractive. And in all these cases city officials, club women, church men, lodge leaders and (most important) local paint merchandisers have coöperated with harmony and mutual advantage.

Judging by the inquiries which the Bureau is daily receiving from merchants, newspapers, club women, city officials, and others, it is believed that the 1919 Clean Up and Paint Up campaign will surpass that of any previous year. The forced neglect of physical conditions in the streets and alleys and in public and private property during the war, now fairly compels immediate and extensive cleaning up and repairing and repainting, to stop waste and depreciation, and the fire and health risk, and as the most immediate means to give employment to thousands of craftsmen and laborers.

An example of what can be done toward stimulat-

ing sales of paint is shown in the accompanying illustration. The window trim for this display was supplied by the National Clean Up and Paint Up Bureau and the arranging of the material was done by Simon Newton for Gould and Cutler Corporation of Boston, Massachusetts. The main scene of the display shows a dummy railroad with the train going over a bridge. Suspended in the middle is a card reading thus: "The road to success for Clean Up and Paint Up is by using Benjamin Moore and Company's paints; Gould and Cutler Corporation, New England Distributors."

Ribbons were run from various parts of the display to cards indicating what product was used. For instance, the ribbon strung from a miniature telegraph pole read, "Moore's Pole Paint;" the card from a house read, "Miniature House Colors;" from the bridge, "Moore's Bridge Paint;" from the railway car, "Miniature Railroad Car Paint;" from the barn, "Moore's Barn and Roof Paint;" from the railroad station, "Moore's Station Paint."

The effect of this attractive display is to make people think "more paint." Service to the community and added business for the store follow such well designed publicity. There is never enough paint used in any town. It is a conservative estimate to say that seven houses out of every ten houses are not pro-

TECTED by paint against the destructive influences of moisture and weather. That means seven paint-neglected houses out of every ten, to the owners of which the dealer can send paint literature supplied by the manufacturer. The necessity exists. It is the business of the retailer to stimulate the demand to fill that necessity. He has an inexhaustible fund of persuasive reasons upon which to draw for that purpose.

THRIFT HELPS DEVELOP EFFICIENCY.

The worker who neglects to save suffers a constant impairment of efficiency. This impairment is of two kinds. (1) The loss of tone due to vague worry about the future—sickness, out-of-work, accident. (2) The letting down of effort that comes from loose discipline. It requires constant self-denial to keep efficient as a worker.



Window Display Suggesting Use of Paints. Arranged by Simon Newton for Gould and Cutler Corporation, Boston, Massachusetts.

THE NATIONAL CROW SHOOT AFFORDS HARDWARE DEALER MEANS FOR INCREASING HIS PROFITS.

The hardware dealer who is in business for profit does not neglect any opportunity for increasing the income of his store. A source of profit which is worth exploiting to the utmost is to be had in the sale of shotguns, hunting rifles, and loaded shells. Many legitimate aids toward an increase of profits in this direction are supplied by the various campaigns fostered by the manufacturers of supplies. One of the notable campaigns of this sort is the National Crow Shoot, which combines healthy sport with useful service to the agricultural community.

It is generally recognized that the crow is not only an arch enemy of the farmer but is also a serious menace to the breeding and propagation of game. The crow's record is like its coat—about as black as black can be. In the interests of the conservation of grain and the protection of game and insectivorous birds, you are invited to take an active part during 1919 in a National Crow Shoot, the chief purpose of which is to wage war against these pests, particularly in sections where they are numerous.

It is estimated that every year insects cause a loss of millions of dollars to the farmers, truck raisers and fruit growers. The farmers are the producers and whatever loss they sustain affects every consumer in the country. Song birds are the natural enemies of all insect life—song birds alone can keep in check the ravages of insects. Crows destroy birds, birds destroy insects, insects destroy crop—therefore, kill the crows and save the crops.

A young crow while in the nest will consume an amount of food equal to three or four times its own weight, and only a small part of this food consists of insects. Most of it is made up of the eggs and the young of other birds which, if left alive, would be of benefit in the protection of crops.

Insatiable egg eaters, they scour the fields, hedgerows, thickets and orchards for nests of birds and even for the eggs of the barnyard fowls. They follow the wild ducks to their nesting grounds in the far North to feast on the eggs and young. Prairie chickens suffer severely from their depredations and the pheasant preserves are the frequent victims of their marauding habits.

Agriculturists affirm that crows are also very destructive to melons, pecking holes in them and causing them to rot on the vines. On many pecan groves in the South men are employed day and night to keep away these "black devils," which travel in huge flocks and literally clean up the crops.

Crows are about as omnivorous as anything could well be. They eat all kinds of carrion and are dreaded agents in the spreading of diseases, such as hoof and mouth disease, hog cholera, glanders, etc.

In its bulletin No. 621, the Bureau of Biological Survey says: "The destruction of nestling birds of highly beneficial species is not to be condoned and constitutes one of the strongest arguments against the crow. On game farms, preserves and in suburban districts where it is the desire to foster small birds, the

crow population must be kept within limited numbers."

It is certain that some concerted action on the part of farmers and sportsmen to reduce the number of these pests will conserve a large quantity of grain and thus prove an important factor in meeting America's obligation to feed the world during these critical years, at the same time giving practical support to the protection and propagation of game in this country. It is for this purpose that the National Crow Shoot will be conducted during 1919.

Best Methods for Killing Crows.

The crow has the universal reputation of being a wise, wily and wary bird. Yet it is surprising how easily they are fooled by anyone who can properly manipulate a crow call. Indeed, the calling-in and shooting of crows by an expert is a revelation to many, who, all their lives, have known and hated these black marauders of the fields and woods. The crow call is a small wood instrument resembling a whistle and can be purchased from almost any sporting goods dealer or hardware store for from 75c to \$1.00. There are several good crow calls on the market. If any shooter or dealer is unable to buy them conveniently, we shall be glad to put him in touch with a source of supply. Directions for its use come with each call.

Preparatory to calling in the crows, the shooter should conceal himself carefully and remain as quiet as possible, for the crow has wonderful eyesight. Many crow hunters even try to wear clothing that will not contrast sharply with the environment. In using the crow call it is desirable to try to imitate the cry of a young crow in distress and to indicate to the older crows that their young are being attacked by some other bird, upon which they will immediately start flying toward the point where the caller is concealed. It is important to kill the first crow shot at as otherwise the crow will give a warning call that will alarm all the other crows in the neighborhood and they will not approach again for some time at least. The birds should be fairly close in, not over 35 to 40 yards, in order to insure a kill with a choke bore gun.

Among other methods suggested for luring the crows within range the following may be recommended: A stuffed owl with movable wings placed up in a tree and operated by cords brought down through rings to the concealed shooter, used in conjunction with a crow call, has proved effective in many instances. If a wounded crow is captured it will serve as an excellent decoy for attracting other crows. One farmer writes that by placing a large piece of meat or the carcass of some animal in a field and then getting under cover at a distance of 40 or 50 yards, he has soon seen from 50 to 75 crows gather around the meat and has been able to kill ten or more with a single shot. Crow shooting in the winter when snow is on the ground is good sport, according to another writer. Decoys are placed in open fields close to the edge of woods or a ditch and the crow call used. After one or two crows have been brought down, they are set up in the field on a couple of pointed sticks and as they soon freeze they make excellent decoys.

Loads for Crow Shooting.

"Any old load will kill a crow," say the sportsmen

—and it is almost literally true. The following are the loads preferred by several very experienced crow shooters:

For a 12-gauge gun: $3\frac{3}{4}$ drams of Dupont or 26 grains of Ballistite, with $1\frac{1}{8}$ oz. of No. 5 or No. 6.

For a 16-gauge gun: $2\frac{3}{4}$ drams of Dupont, with $\frac{7}{8}$ oz. of No. 6.

For a 20-gauge gun: $2\frac{1}{4}$ drams of Dupont, with $\frac{7}{8}$ oz. of No. 7. Either soft or chilled shot.

These, however, are but individual selections and you can take almost any load that happens to be handy and be reasonably sure of getting satisfactory results.

Prizes for the National Crow Shoot.

In view of the fact that conservation is the purpose of this war against the crow, the trophies offered in this contest do not represent any great monetary value. No incentive at all is really needed to get farmers and sportsmen to kill as many of these destructive pests as possible—and besides it is the spirit of competition rather than the value of the prizes that makes for a successful contest, particularly when results are helping Uncle Sam feed not only this country, but also many of the nations of Europe.

To every contestant in the National Crow Shoot who during 1919 shoots twenty-five (25) crows will be awarded a triangular bronze lapel button.

To the two bronze trophy winners in each state (or province in Canada) who shoot the largest number of crows during 1919 will be awarded, respectively, the following trophies, each to be engraved with the total number of crows shot by the contestant:

First State Prize.....Gold Trophy Button.

Second State Prize.....Silver Trophy Button.

To the three gold trophy winners who shoot the largest number of crows during 1919 will be awarded, respectively, the following trophies, each to be appropriately engraved:

First National Prize.....Gold Trophy Cup.

Second National Prize.....Silver Trophy Cup.

Third National Prize.....Bronze Trophy Cup.

Conditions of the Contest.

1. Anyone in the United States or Canada is eligible to take part in the National Crow Shoot.

2. The National Crow Shoot will be conducted to conform strictly to the Federal and State game laws and nothing contained in our offer is to be construed as urging anyone to violate any game law. Each individual should inform himself with regard to his local game laws before taking part in this contest.

3. To receive credit in the contest, crows must be killed with a shotgun or rifle.

4. Evidence of crows shot is to be furnished by the contestant in the form of a signed statement, countersigned by an ammunition dealer, upon forms furnished for the purpose. It is expected that the contestant will furnish the dealer with evidence of his kills in the form of the bills or feet of the crows shot. The statement forms will be supplied to dealers and contestants upon request.

5. The contest will be open from January 1 to December 31, 1919.

ANALYZES THE WHIMS WHICH GOVERN BUYING HABITS OF CUSTOMERS.

The resemblance between ants and human beings has been the subject of many interesting studies. If you destroy an ant hill, the sturdy insects will patiently set about rebuilding it on the same spot. If an earthquake destroys a city, such as Messina in Italy or Valparaiso in Chile, the inhabitants will patiently set about rebuilding it also on the same site. The resemblance runs through many parallels not excepting the field of merchandise. This has led Fred C. Kelly to form many suggestive observations in an article in *The Dry Goods Economist*.

Manufacturers have always assumed that if they could get their displays into the retail store, that all was well. Little concern was given to what part of the store the goods were placed in. Whether they were on the right or left didn't make any difference. If the product were displayed in fair prominence, the manufacturer was content. Now, however, we are learning that various sections of the store differ in sales value. Products that are shown in one place are much more likely to be sold than those that are shown somewhere else.

"You see a crowd of people moving about a store, and at first glance nothing could be more ant-like, more dependent on human whim and chance, and less according to rule, than their movements," says Mr. Kelly.

Can Prophecy Trading Habits.

"Yet it is possible to know not only where most of the crowd will go, in a store, but, in a general way, what they will buy. Once you know where most of the people are going to walk, you can tell where is the most effective spot to display things that one especially desires to sell. One may even lay off the floor space of a store into small sections and figure out—knowing where the people will walk—the rental value of each section.

"In a store 20 feet wide by 100 feet deep, for example, the space in the first ten feet back from the street, including the show windows, is worth almost one-fourth as much as the entire floor area.

"And there is a point on the right hand side of the middle aisle, between fifteen and twenty feet back from the front entrance, which is the most advantageous selling place in the store. If you were offering a bargain in candy, for instance, you could not possibly sell as much anywhere else—other things being equal—as you could right at that space.

"There's a Reason."

"And what is the reason? Why isn't the space just as good on the left hand side? Or a little nearer the door?"

"One of the contributing forces which determine space values in a store is the fact that people in America are accustomed to keep to the right. Whether driving along the street, or strolling along the sidewalk, we ordinarily adhere to this rule.

"In a store we can walk in any direction we see fit—toward whatever display of goods attracts us. But for a moment we seem to forget that we are no longer

required to follow traffic regulations. Having entered the store we continue to keep to the right.

Crowd Larger at the Right.

One may glance into almost any busy store at any hour of the day and observe for himself how much larger the crowd is at the right than at the left of the front door. In big stores where there are ladies' rest rooms on each side of the first floor, the one on the right is nearly always used about twice as much as the one on the left.

"After proceeding down the aisle at the right-hand side for a short distance the majority of shoppers appear to become disgusted with trying to force their way through the crowd ahead, and then it dawns on them that there is no law against walking on the left side of the aisle. At any rate they begin to cut across to the other side. But having crossed over, once more there is a tendency to keep to the right, and they gradually swerve back again. There is a general scattering as they get farther from the entrance, but more people reach the extreme rear of the store on the right than on the left side of the aisle.

Trade Goes to Rear of Store, Too.

"And a counter at the rear of the store is a better place to sell goods, by the way, than a counter a few feet nearer the front. For people, having gone to the turning-around place, are likely to pause and glance about them before starting back.

"Now, if they continued to bear to the right on the return trip they would swing over to what is the quieter side of the store. But the strange thing is that they return toward the front on what is then the side to their left, the same side that they came in on. The reason is that the incoming traffic tends to force them to the left.

The Best Selling Space.

"At a certain point—which varies according to the size and arrangement of the floor area—the incoming and the outgoing traffic meet and criss-cross. It is the counter nearest to this point that is the best display place in the store. For, not only are there more shoppers there than any place else, but they are compelled, because of one another, to move slowly and have opportunity to look at whatever is displayed about them.

"As already stated, this point in a store having a floor area of, say, 20 by 100 feet, would be in the neighborhood of eighteen feet from the front door on the right hand side. A counter directly in front of the door might attract more attention than anywhere else, but it would block the aisle too close to the entrance. On either side of the entrance are, of course, excellent selling locations. In fact, there are more square feet of good selling space there than anywhere else. But the one little spot of greatest selling possibilities is farther back.

Candy Sales Prove Proposition.

"This problem of where people walk in stores, and why they do it, excited the interest, some time ago, of a Cleveland advertising man and statistical expert by the name of Jay Lee Cross. For a period of two or three years Cross conducted experiments in stores of different kinds in various places. He tried selling small articles in different parts of the stores under all

manner of conditions. Usually he used candy—small sugar wafers—in conducting the experiments.

"An inexpensive article had to be employed for such tests, for it is obvious that the selling power of one location over another would not be so applicable to the more costly articles which require thought and consideration before buying. A man may have his attention attracted to a toothbrush or an assortment of candies, and buy, but the mere fact that he suddenly comes upon a clump of pianos does not mean that he will order one sent home.

Conditions Will Affect Selling.

"One of the difficulties of Cross's experiments lay in the fact that it was necessary for him to make proper allowance for varying conditions. For instance, to sell more candy in one part of a store on Monday than in another part on Tuesday would not prove anything. Because there are more shoppers on Monday.

"Moreover, even if the number were the same, people are rather more likely to spend money freely on Monday than on Tuesday.

"Then the weather, rain, cold, or a warm spell, each exerted an influence over people's desire for candy. By making a careful count, however, of the number of persons entering a store, and making such allowance as his experience had taught him was proper for each change in conditions, Cross finally learned a number of things about people which enabled him to formulate some fairly positive rules.

Right Hand Windows Most Effective.

"He found out that a display in the window at the right of the main entrance is much more effective than one in the left-hand window—simply because people enter a store at the right-hand side of the door and are likely to look at the window on the way in.

"By repeated tests he found out just how much the sales of an article can be increased by a clever display of the article in the show window. There must be a separate rule worked out for each store and each set of conditions, but in a general way one may say that a good window display will boost the sales of a small, inexpensive article about 14 per cent.

What Window Space is Worth.

"The space devoted to show windows is worth a surprisingly large proportion of the rental value of the entire store. In one store, more than 100 feet long, the windows, only two feet deep, proved to be worth 12 per cent of the rent asked for the whole place.

"Cross found, too, that there was a definite relation between any window admitting light to a section of the store, and the sales in that section. Generally speaking, a window on the side will add about 1 per cent to the value of the part of the store it brightens. And this 1 per cent will be drawn from the value of the darker parts of the store.

"Ordinarily, in a store 20 by 100—using that size as a standard of comparison—the five foot square, including the show window space, in the right-hand front corner would be the most valuable five-foot square in the whole area. This small space would be worth 8½ per cent of the total rental. The next five-

foot square toward the rear would be worth only $3\frac{1}{2}$ per cent, and the next two after that about the same.

Values in Percentages.

"From that point there is a gradual diminishing of value for spaces along the right-hand side of the store until a little more than half-way back a five-foot square is worth only one-half of 1 per cent of the store rental.

"Then there is an increase again toward the rear, and the two rear corners—where traffic is compelled to slow up—are worth $1\frac{3}{4}$ per cent on the right and $1\frac{1}{4}$ per cent on the left side.

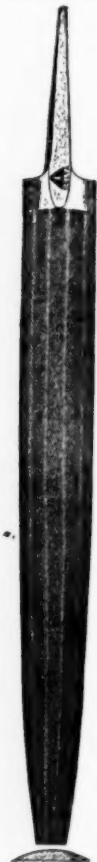
"We are living in an era when business men are coming more and more to know what they're about. Every year scientific precision takes the place of some item of guesswork.

"Human ants are we, and we are full of whims and caprice. But the retail business man who fails to know just what we ants are likely to do at any stage of the route, and to make capital of his knowledge, is guilty of ant-like leather-headedness, and sooner or later may come out at the little end of the horn."

MAKES FILES FOR EVERY PURPOSE.

The Delta File Works, Philadelphia, Pennsylvania, makes a large and complete assortment of files and rasps for every possible purpose. In the accompanying illustration is shown one of its many products. The Delta File Works is well aware of the fact that no product can be better than the material from which it is manufactured and the company particularly states that the material used for its files and rasps is of the highest quality obtainable. All the refined cast steel from which the Delta Files are made is tested and examined by experts before it is permitted to be made up. It has been said that mechanics who know steel and its values take a good file and after treating it properly, make knife blades from it. Of course it is understood that this can only be done when the file in the first place is of very high quality. In many shops where this process obtains, it has been learned that the files selected for this purpose bear the trademark of the Delta File Works.

The Delta File Works is a firm believer in the window display as a sales producer. It maintains that with a large assortment of files of different sizes and cuts practically any dealer can make a good window display. Of course there is a difference between a good window display of files and a window display of good files, consequently the goods displayed must be guaranteed to give the right kind of service. The files made by the Delta File Works are backed by a written guarantee of absolute satisfaction. They are known for their deep teeth, durability and cutting efficiency. Dealers can obtain more complete information by addressing the Delta File Works, Philadelphia, Pennsylvania.



File
Made by
the Delta
File
Works,
Philadel-
phia,
Pennsyl-
vania.

HARDWARE FIRM INCORPORATES.

Having substantial reasons for confidence in the continued prosperity of the hardware trade in its territory, the firm of R. C. Jordan, 119 Main and 118-120 Mill Streets, Ottawa, Illinois, has taken out papers of incorporation. The hardware and sheet metal business of the concern is to be continued by the newly chartered corporation of the Jordan Hardware Company, of which R. C. Jordan is president and John M. Jordan secretary-treasurer. Due to its progressive methods of merchandising and its consistent and intelligent advertising, the Jordan firm has grown from modest beginnings to a position of prominence in the field of hardware and sheet metal business.

DO NOT BECOME A "GARABEDIAN."

What is a garabedian? Is it serious? The Peptimist, of the Columbia Graphophone Company has introduced a new word into the language, based on the efforts of an Armenian who claimed to have discovered a method of summoning "free energy" from the atmosphere. His dream failed of realization, even though he did succeed in having a special congressional investigation of his "invention." He thought more of the ends than the means—and ignored the natural laws which govern physics, mechanics and the general well-being of humans. Girgossian, who "invented" Garabed, was probably sincere. So are those patriots who have a sure cure for the submarine, or a new method of flying. They take up the valuable time of naval and army boards who investigate, and discover that the inventor hasn't troubled himself to work in cooperation with natural laws. The inventor's hopes go glimmering, and a board of highly trained specialists goes on with less spectacular, but much more effective devices.

We have Garabedians in commercial life. They plan a new selling campaign that would work successfully, except that they cannot place the master cog that gives life to their scheme. Fundamentally the plan is deficient. "And all the king's horses and all the king's men" couldn't drag the scheme within range of success.

The Peptimist has prescribed against Garabedism. It puts emphasis on the fact that success and power must come from within. There can be no mysterious inspiration from without; no waving of a magician's wand to awaken the missing force and summon it from the air. The energy which does things doesn't grow on trees. It is composed of time, and unsparing effort. Time is a fixed value—no one can get more than sixty minutes out of an hour. But he can make the hours fuller and more effective by the earnestness and system of his effort.

A Garabedian wastes not only his time and effort, but squanders the resources of others. He chases butterfly visions, when the realities of life are in his hands.

The Peptimist suggests how man can seize all the powers around him, and put them to work.

"Books—read the good ones. Study biography. Learn from the records and achievements of others.

"People—associate with the good ones. Study the methods of winners. Learn from men who know.

"Work—the one absolutely essential basis in every formula producing energy."

Faith of itself will win no battles. Faith, with enthusiasm, will win against great odds. Apply the power that is within you. Niagara, before it was harnessed to do man's bidding, was a spectacle.

OPPORTUNITIES FOR FOREIGN TRADE PRESENTED BY BUREAU OF FOREIGN AND DOMESTIC COMMERCE.

The Bureau of Foreign and Domestic Commerce through its Special Agents, Consular Officers and Commercial Attachés is receiving information of opportunities to sell hardware and kindred lines in several foreign countries. Names and locations will be supplied on request to the Bureau in Washington or its District Offices. Such requests should be made on separate sheets for each opportunity, stating the number as given herewith:

28,369.—A firm in Australia wishes to secure an agency for the sale of hardware, etc. Reference.

28,372.—A man in France desires to secure an agency for the sale of tools, machine tools, and motor cars and accessories. Correspondence should be in French. Reference.

28,375.—A company in Australia wishes to secure an agency for the sale of all motor accessories and supplies. Reference.

28,376.—An agency is desired by a firm in France for the sale of sporting goods. Correspondence should be in French.

28,377.—A firm in Sweden wishes to purchase iron, steel and general hardware. Correspondence may be in English. References.

28,380.—A commercial agent in France wishes to secure an agency for the sale of American goods. Correspondence may be in English.

28,384.—An agency is desired by a man in France for the sale of agricultural machinery, corrugated sheet iron, and all kinds of agricultural implements and supplies. Correspondence may be in English. References.

28,390.—The manager of a firm in China, who is soon to be in this country, desires to purchase hardware, and sundries.

28,393.—A commercial agent in Algeria desires to secure an agency for the sale of kitchen and household articles in tin, enamel, and galvanized iron; steel for construction purposes; agricultural machines, etc. Correspondence should be in French. Reference.

28,394.—An agency is desired by a man in Switzerland for the sale of building materials, painting equipment, ironware, household articles, sanitary supplies, lac and colors, and technical and special articles. Correspondence may be in English. References.

28,396.—A man in France desires to purchase cycle parts and accessories of all kinds, hardware, nails, tacks, padlocks, etc. Correspondence may be in English. Reference.

28,399.—A firm in Switzerland desires to secure an agency for the sale of agriculture machines. Correspondence may be in English. References.

28,401.—A business man in France desires to purchase wrapping paper, print paper, cardboard, all sorts of stationery supplies, packing materials, and foodstuffs. Correspondence may be in English. Reference.

28,402.—A company in England desires to secure an agency for the sale of hardware, etc. References.

28,411.—A man in France wishes to secure an agency for the sale of cycle accessories, automobiles, and tractors. Correspondence should be in French.

28,412.—An agency is desired by an American citizen for the sale in New Zealand and Australia of hardware, etc. He expects to leave for these countries shortly. References.

28,413.—A man in Argentina desires to secure an agency for the sale on commission of hardware, building material, etc. Correspondence should be in Spanish. References.

28,414.—A man in Australia wishes to secure an agency for the sale of hardware specialties and motor-car accessories. Reference.

28,415.—A business man in France desires to secure an agency for the sale of general merchandise. Correspondence may be in English.

28,419.—A firm in Denmark desires to secure an agency for the sale in Poland of hardware, automobile accessories, etc. Correspondence may be in English. References.

28,420.—A commercial agent in France wishes to secure an agency for the sale of agricultural machinery and hand tools. Correspondence may be in English. Reference.

28,421.—A company in Jamaica desires to represent exporters of hardware.

28,422.—A man in France wishes to secure an agency for the sale of automobile accessories, electric starters, etc. Correspondence may be in English. Reference.

28,428.—A commercial agent in France desires to secure an agency for the sale of hardware. Correspondence should be in French. Reference.

28,431.—A Belgian importer in England desires to obtain an agency for the sale of twine, bicycles, motorcycles, tractors, cutlery, kitchen articles and novelties of all kinds. References.

28,432.—A man in Italy wishes to secure an agency for the sale of hardware. Correspondence may be in English. References.

28,436.—A man in England desires to secure an agency for the sale of hardware, household goods, brushware, electrical motor and cycle accessories, etc. Reference.

28,440.—A firm in Italy desires to secure an agency for the sale of agricultural machinery for work in the mountains as well as on the plains, hardware and kitchen utensils. Correspondence may be in English. References.

28,441.—A company in England desires to secure the sole agency for the sale of tools and general hardware. References.

28,442.—A firm in India wishes to secure an agency for the sale of paints, varnish, hardware, metal, window glass, cutlery, etc. Quotations should be given f. o. b. New York. Terms, payment against documents at 60 days sight. References.

28,449.—A firm in India desires to purchase and to secure an agency for the sale of motor cars, cycles, tires, tubes, and accessories. References.

28,452.—A commercial agency in Honduras desires to represent firms for the sale of all lines of goods used in tropical countries, such as hardware, paints, electrical novelties, agricultural machinery and implements, sporting goods and enamel ware. Quotations should be made f. o. b. American port. Correspondence may be in English.

28,454.—A company in Cuba desires to secure an exclusive agency for the sale of iron and steel articles and hardware.

28,456.—A man in France desires to represent manufacturers and exporters for the sale of steel, tin-covered, galvanized, brass, and copper wire; window glass, and other industrial articles. He requests samples that he may open a showroom, and would install factories and stock rooms for American exporters. Correspondence should be in French.

28,458.—A request has been received from a man in France that he be placed in communication with firms to purchase and also secure an agency for the sale of American products in France and in the Balkan countries. Purchases to be made on a cash basis. Correspondence should be in French.

28,459.—A man from Denmark, who is to be in this country for some time, wishes to be placed in communication with manufacturers and exporters of general merchandise with a view to securing agencies in that country. References.

28,461.—A firm in Dominican Republic desires to receive an agency for the sale of structural material such as zinc, galvanized iron roofing, steel rods, general hardware, etc. Quotations should be given f. o. b. New York. Correspondence may be in English. References.

28,463.—The branch of an export commission firm of New York established in Venezuela desires to secure agencies from American manufacturers and solicits catalogues and correspondence. An office for the display of catalogues and samples has been fitted up, and competent salesmen are being secured.

28,464.—A firm in Scotland desires to secure an agency for the sale of cutlery, etc. Quotations with samples are requested.

28,466.—A man in France wishes to secure an agency for the sale of manufactured articles, such as certain lines of hardware, and motorcycles with side-car attachment. References.

28,473.—An agency is desired by a man in Algeria for the sale of hardware, agricultural machinery, etc. Correspondence may be in French or Spanish. Reference.

28,482.—A firm in Norway desires to purchase and to secure an agency for the sale of building equipment supplies, heavy hardware specialties generally included in hardware stocks, etc. Payment through New York bank. Correspondence may be in English. Reference.

28,483.—An agency is desired by a man in Algeria for the sale of hardware, paints and varnishes. Correspondence should be in French. Reference.

28,484.—A company in Roumania desires to secure an agency for the sale on commission of American products in that country and the Balkans. Correspondence may be in English.

28,486.—A merchant in France desires to secure an agency for the sale of steel tools and steel for the edge tool trade, chisels, mining picks, auger bits, and screw augers. Correspondence should be in French.

COMING CONVENTIONS.

Michigan Sheet Metal Contractors' Association, Kalamazoo, March 5, 6, 7, 1919. Park-American Hotel. F. E. Ederle, 1121 Franklin Street, S. E., Grand Rapids, Michigan.

Wisconsin Sheet Metal Contractors' Association, Hotel Wisconsin, Milwaukee, March 20, 1919. Paul L. Biersach, Secretary, 661 Hubbard Street, Milwaukee, Wisconsin.

Southern Hardware Jobbers' Association, St. Charles Hotel, New Orleans, Louisiana, April 8, 9, 10, 11, 1919. John Donnan, Secretary, Richmond, Virginia.

American Hardware Manufacturers' Association, St. Charles Hotel, New Orleans, Louisiana, April 8, 9, 10, 11, 1919. F. D. Mitchell, Secretary, 4126 Woolworth Building, New York City.

Sheet Metal Contractors' Association of Illinois, Jefferson Hotel, Peoria, Illinois, April 9, 10, 1919. Frank I. Eynatten, Secretary, Peoria, Illinois.

National Sheet Metal Contractors' Association, Columbus, Ohio, June 10, 1919. Edwin L. Seabrook, Secretary, 261 S. Fourth street, Philadelphia.

RETAIL HARDWARE DOINGS.

Illinois.

Cosgrove and Orr, hardware dealers at Dwight, have dissolved partnership, M. Cosgrove continuing the business.

The Eckhard Mercantile Company's hardware store at Alton was damaged by fire.

Indiana.

Harry Kerr has bought an interest in the Veedersburg Hardware and Furniture Company at Veedersburg.

Jesse Walters has bought a half interest in the N. A. Rogers hardware business at New Ross.

Iowa.

Edward Heinz has sold his hardware store to George L. Rundell at Marshalltown.

The Mittelstadt Hardware Company, Storm Lake, will erect a new building for their business.

H. Slaughter has sold his hardware and implement store at Thurman to H. F. Evans.

A. E. Cline's hardware store at Reinbeck was damaged by fire.

Kansas.

Warren Harding has disposed of his interest in the Huntley hardware store at Huntley.

The O. L. George Hardware Company, Wichita, has purchased the hardware stock of B. E. Bowles.

J. E. Benson has sold his hardware stock at Americus to the Haynes Brothers.

The Copeland Hardware Company, Copeland, has bought M. P. Peterson's hardware stock.

The Ed L. Smith Hardware and Implement Company, the C. W. Kottis Vulcanizing Works and Ralph M. Smith, Burlingame, have consolidated under the name of the Ed L. Smith Hardware Company.

The Bonner Springs Hardware Company, Bonner Springs, has moved into its new building and E. L. Walker has been placed in charge.

M. Slattery has disposed of his interest in the Slattery and Smith Hardware Store at Mayetta to Frank Hafer, the new name of the firm now being Smith and Hafer.

M. E. Ver-Brugge has purchased the stock of hardware from H. J. Connell and Son at Reading.

V. C. Van Geison and Keith Artman of Wichita have purchased the Bardshar Hardware Company at Mount Hope and will take charge of the business immediately.

Kentucky.

E. E. Shannon has sold his hardware and furniture stock at Louisa to Lafe Willman.

Minnesota.

Henry Leitschun has opened a hardware store at Sleepy Eye.

Junkins and Clark have sold their hardware store at Lake Benton to Fred and John Briffett.

E. J. Lavine has bought T. P. Cory's hardware store at Buhl.

J. F. Mikulack has sold his interest in the hardware business at Hutchinson to F. J. Zila.

James Konbelle will soon open a hardware store at Lonsdale.

E. T. Dawson has sold his interest in the Dawson Brothers hardware business at Columbia Heights to H. O. Robinson.

Arthur Clementson has bought the interest of Martin Sibilrud in the hardware business at Hartland.

R. C. Whitney and T. C. Thompson have formed a partnership at Granite Falls as Thompson and Whitney to conduct a hardware and implement business.

Missouri.

C. M. Haynes has purchased J. Fyer's interest in the Olean Hardware Store at Olean.

The Nix and Gerghofer Hardware Company, Palmyra, has moved to its new location in the former quarters of Best Brothers hardware store.

Robert Clark and Sons, Kirksville, are opening a new hardware store on the north side of the square.

Hudson and Welch hardware store, Maryville, has been sold to Howard Wray, who has taken possession.

Montana.

The Montana Hardware Company, Lewiston, has been consolidated with the Montana Lumber Company.

Charles S. Eder has bought his brother's interest in the Eder Hardware Company at Hardin and is now sole owner.

Nebraska.

Cohagen and Jensen, Aurora, have sold their hardware stock to E. W. Hahn.

Albert W. Klug and Louis H. Gruett, Pierce, have bought the Klug and Son hardware business.

C. A. Kiplinger has sold his hardware store at Erickson to T. H. Thilock.

Otto Buessow has succeeded his father in the hardware business at Bertrand.

M. S. Mather has disposed of his stock to the Schrandt and Miller hardware store at Aurora.

The Colon Hardware Company, Colon, has increased its capital to \$20,000.

The hardware store of Loken and Osner at Albion was destroyed by fire. They will rebuild at once and resume business.

Ohio.

The Hazard Hardware Company, Hazard, has increased its capital to \$30,000.

North Dakota.

Henry Olson has sold his interest in the hardware business at Hillsboro to his partner, William Henning.

The hardware store of Erickson and Gunthorpe at Edgeley was destroyed by fire.

C. T. Mahoney has bought a hardware business at Coteau.

Oklahoma.

William Neff has purchased a hardware store at Blackwell.

The stock and fixtures of the Hunt-Cole Hardware Company, Miami, will be moved to Fort Smith, Arkansas.

The Boswell Hardware Company, Boswell, has opened for business with a stock of hardware, implements, furniture, etc.

The Pawhuska Supply Company, Tulsa, has opened for business at 126 West Main Street, with a stock of hardware, plumbing supplies, etc.

R. B. and E. L. Sheets have purchased the stock of hardware formerly owned by the Smith Brothers at Purcell.

South Dakota.

George H. Small Hardware Company, Ashton, has been incorporated for \$30,000 by George H. Small and John D. Mustad.

E. S. Chaffee has sold his hardware and implement stock to E. F. Wheelock of Wessington.

The Kaske Norfjore Hardware Company at Chester has dissolved partnership, H. M. Norfjore continuing the business.

Harold Rensch has taken over the interest of his father in the hardware business at Madison.

Texas.

The Borderling Hardware Company, San Benito, has purchased a stock of hardware, furniture, etc., from J. T. Lomax.

The C. O. Lee hardware store at Hereford has added the stock of the Parker Perkins Hardware Company.

The Frank P. Wood Hardware Company, Corsicana, has increased its capital stock from \$15,000 to \$25,000.

J. M. Murphy has sold his hardware store at Troup to W. E. Burke.

The Gerlach Mercantile Company, Ochiltree, has sold its stock to the Canadian Hardware and Furniture Company.

The hardware store of Walling Brothers at Burkburnett was destroyed by fire.

The East Texas Hardware Company, Orange, has been incorporated for \$20,000.

Washington.

The Hamilton Hardware Company has enlarged its quarters at Pullman nearly 100 per cent.

Wisconsin.

W. E. Gherke and Otto Lemke will open a hardware store at New London.

William Kingston has taken his son Harry into the hardware business at Mukwonago, the new name being Kingston and Son.

The Perkins Hardware Company has sold its stock at Waukesha to D. A. Williams, F. H. Ward and S. A. Perkins.

Otto Garder has bought a half interest in the Hustad hardware store at Orfordville.

Welch Brothers, Oconomowoc, have dissolved partnership, Rayton Welch continuing the business.

Leonard and Sons have bought the Kittleson Hardware Company's stock at Blanchardville.

F. B. Seville has sold his hardware stock at Augusta to H. A. Linder.

AUTOMOBILE ACCESSORIES SOLD BY HARDWARE DEALERS

SHOWS HOW TO CONSERVE BATTERY.

The dealer who sells automobile accessories increases his ability to serve his customers and enlarges his opportunity for profit by constantly adding to his knowledge of the goods which he sells. In the matter of storage batteries, for example, it is profitable to have and dispense accurate knowledge. One of the foremost battery manufacturers gives the following instructions for a quicker start through proper use of the storage battery:

"When you start your car, don't try to do it all with the starter button, for that only wastes current. Prime your cylinders and then:

"1. Set your controls right, with retarded spark and throttle slightly open.

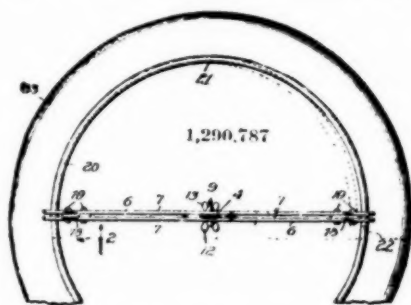
"2. Use your choker to get a richer mixture and quicker explosion.

"3. Throw out the clutch and take some of the load off the engine.

"4. Then—and not till then—step on the button, and away she'll go."

ACQUIRES PATENT FOR A TIRE TOOL.

Gustaf A. Safstrom, Chicago, Illinois, has obtained United States patent rights, under number 1,290,787, for a tire tool described herewith:



A tire-tool comprising bars extending in opposite directions, and means for shifting said bars relative to each other in both directions, said bars having off-set

portions with hooked ends whereby a relatively long shoulder surface is provided at the off-set for expanding the rim and the body of the bar is brought to about the mid plane of the rim when the off-set parts rest on the rim to support the device, while the hooked ends are opposed to the flange of the rim to interlock therewith for contracting the rim, and the rim may be either contracted or expanded without a reapplication of the device thereto.

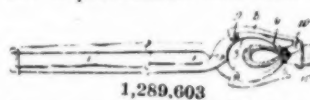
STOPS DRIPPING OF GASOLENE.

Accessory dealers are often asked for advice concerning various automobile troubles. A frequent difficulty is that of stopping gasoline dripping from the carburetor when the car is standing and the engine at rest. In such a case, the needle valve connected with the float should be examined. If press-

ing it down puts an end to the dripping, the float is too high. If, however, the dripping continues, the valve leaks and should be ground in, using pumice stone for that purpose.

PATENTS A PNEUMATIC TIRE TOOL.

Albert W. Bailey, Jasper, Michigan, has secured United States patent rights, under number 1,289,603, for a pneumatic tire tool described herewith:



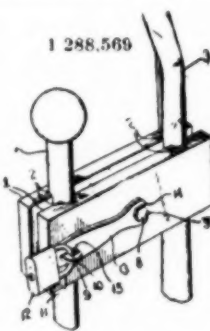
In a tire tool, the combination of a pair of hand levers, oppositely arranged jaws carried by said levers and adapted to press the side walls of a tire inwardly from under the clencher flanges of a tire carrying rim, and oppositely arranged arms pivotally connected to said jaws and provided adjacent to the free ends thereof with rim engaging hooks, said arms being of unequal length and the hooks thereof being located at different distances from the pivotal connection of said levers.

PREVENTS TOOLS GETTING RUSTY.

Although it is apparently to the interest of the hardware dealer who handles automobile accessories to sell as many tools as possible, yet it will redound in greater measure to his profits to instruct his customers how to prevent tools getting rusty. A service of this sort creates good will and holds the customer's patronage. A good method for preventing rust is to add a little camphor to vaseline and melt the mixture over a slow fire. When sufficiently cooled, apply the mixture to the tools with a soft rag.

GETS PATENT FOR AUTOMOBILE LOCK.

Lloyd B. Hallock, Akron, Ohio, has secured United States patent rights, under number 1,288,569, for an automobile lock, described in the following:



In an automobile lock, the combination of a pair of clamping members formed in their adjacent faces with grooves to receive the emergency brake lever and gear shifting lever of a motor vehicle, a clamping screw passing through said members and having a polygonal head, an eye-piece projecting from one of said members, a detachable wrench shaped lever having a slot in one end thereof to fit the head of the clamping screw and formed adjacent to the other end thereof with a slot to receive said eye-piece, and a lock insertable through and removable from said eye-piece and serving to hold said turning lever in engagement with the clamping screw.

ADVERTISING CRITICISM AND COMMENT

Helpful Hints for the Advertisement Writer

To the regular customers of Grieg-Westman Hardware, Plumbing and Heating Company the announcement in the *Illinois State Journal*, Springfield, Illinois, of the firm's new location is probably of some interest.

Our New Location
415 EAST MONROE ST.
(Next Door to Piggy Wiggy)

Let Us Take Care of You for
Anything in

**HARDWARE
PLUMBING
—AND—
HEATING**

It's Right If It's From—

Grieg-Westman
HARDWARE, PLUMBING
AND HEATING CO.

To others it means little or nothing. In place of this bald statement of change of address, a more effective advertisement could have been used. A special "open-

ing of new location" sale could be featured and one or two genuine bargains in staple hardware offered as an inducement to the buying public to visit the new store. In fact, it could be stated in the advertisement that the bargains are for this occasion only and intended to make it worth the customer's time in visiting the new location. Such bargains would not be an act of undesirable price-cutting, but a justifiable sacrifice of profit for the sake of getting acquainted with additional prospective customers in a new neighborhood.

* * *

The advertisement of the Fellows Hardware Company which is herewith reproduced from the *Eve-*

Safety Razor Blades

GILLETTE,

DURHAM DUPLEX,

EVER-READY,

AUTO STROP,

ENDERS,

SEXTO BLADES,

GEM JUNIOR.

We stock the above Blades—and then some!

Fellows Hardware Co.

31-33 MERRIMACK ST.

TEL. 559.

ning Gazette of Haverhill, Massachusetts, serves a useful purpose. It tells the public that all the standard types of safety razor blades are carried in stock and indirectly conveys the impression that no customer seeking a particular blade will be disappointed. It suggests trustworthy service in the completeness of the assortment. This is sound advertising because good will rests not only on quality of goods bought but also upon the certainty of being able to get what one wants without delay or offers of substitutes.

Sincerity is manifested in the advertisement of Olds and Whipple, reproduced herewith from the *Hartford Daily Courant*, Hartford, Connecticut. The stove service described therein is genuine. The reader feels that every word is intended to represent the truth, without exaggeration or subterfuge. A firm

STOVE SERVICE

Whoever buys a Stove of us buys Service as well. Our interest does not end with the sale. We want you satisfied, and to this end our department head and expert workmen give prompt attention to every sort of complaint, and do not rest until satisfaction is attained. Also, for your convenience a great stock of Stove repairs are kept on hand to avoid long waits and the annoyance of delay.

Olds & Whipple

164-6-8 State Street.

whose service is so thorough that it does not cease until satisfaction is attained, is certain to gain the good will of its patrons. This advertisement is remarkable not only for its pledge of utmost service, but also because it shows in the final paragraph a practical working of that service, laying stress upon convenience and promptness.

* * *

It must be conceded that not a great deal can be printed in the small area of four and three-eighths by two and one-half inches. Given such scant dimensions, the first impulse of the advertiser is to mention as many commodities as he can crowd the names of into that small space. This is seemingly the case with J. B. Hardin, whose advertisement, measuring four and three-eighths by two and one-half inches, appeared in the *Morning Tribune* of Tampa, Florida.

John Deere and International Harrows and Riding Cultivators

John Deere and Avery Plows

Weber and Studebaker Wagons

Harness and Saddles

BEST OIL STOVES

Roofing—Old Price—Field and Poultry Wire

Everything in the HARDWARE LINE

Come and See Us

J. B. HARDIN,

2205 Seventh Ave.
Ybor City

Better results could be obtained from this limited space by intensive cultivation of its possibilities. Let him take one article at the time and concentrate all his powers of persuasion upon its presentation in this space. Mention prices and single out some particular argument of quality which actually helps sell the article in the store.

HEATING AND VENTILATING

DEFINES VARIOUS FUELS FOR HEATING RESIDENCES.

Most people when fuel for residence heating is mentioned think of the particular kind that they are accustomed to use, but, of course, all people do not use the same fuel, says a bulletin of the United States Bureau of Mines. Locality, climate, cost and other considerations govern the choice, and the fuel used may be wood, anthracite, bituminous or subbituminous coal, lignite, peat, coke, oil or gas. Even electricity may be used.

Wood is little used for heating residences except in those regions where it is plentiful and other fuels are relatively expensive. Some people in places where coal is the usual fuel burn wood in open grates because of the cheerful appearance of the fire, but the quantity of wood available for fuel is becoming less and less. Because of the relatively high percentage of water in wood—usually between 15 and 40 per cent—the amount of heat obtainable by burning a pound of wood is relatively small.

Many people select anthracite for residence heating because it is clean, but additional reasons are its fairly high heat value, the relative ease with which a reasonable proportion of this heat value can be realized by heating apparatus, the easy control of the fire, and particularly the long period for which the fire may be left without attention. But anthracite is becoming more expensive and therefore its use is being restricted.

The bituminous coals vary so much in composition and in physical characteristics that they can hardly be considered as one class. In general it may be said that the bituminous coals mined in the eastern part of the United States are of higher rank than those produced farther west, having usually a greater heat value, less inert matter (or ash), less moisture, and a smaller proportion of gaseous constituents, or, as these are ordinarily termed, volatile matter. Bituminous coals also differ widely in coking properties; those mined in the eastern states tend to coke or cake together when heated in the furnace, and with many of them the tendency is very decided, whereas coals of the same general class mined in some of the states farther west have little or no tendency to coke, and still other western coals have much the same coking properties as do the eastern coals. The bituminous coals constitute a large part of the fuel used throughout the country for heating purposes, for the reason that they are the most readily available and the cheapest fuel.

The different bituminous coals vary greatly in heat value, some of them ranging as high as 14,700 and others as low as 8,500 or 9,000 British thermal units per pound, a British thermal unit being the quantity of heat required to raise the temperature of 1 pound

of water 1 degree Fahrenheit. Ordinarily, the heat value of a fuel is determined by burning a small quantity of the fuel inside a water-jacketed steel bomb containing oxygen gas under pressure. The heat generated by the burning of the fuel raises the temperature of the water surrounding the bomb and by knowing the quantity of fuel burned, the amount of water in which the bomb is immersed, and the rise in temperature of this water, it is possible to compute the number of heat units that 1 pound of the fuel will generate.

Subbituminous coals, lignites and peat are ordinarily used within comparatively short distances from where they are produced. Both the subbituminous coals and the lignites slack or break into small pieces, on exposure to the air. This unfavorable feature and the further fact that neither of these fuels can be stored without danger from spontaneous combustion, as well as the usually low heat values, limit the area within which they can profitably be transported and used.

The peat bogs in the United States have not been largely utilized as sources of fuel, because of the abundance of fuels of higher grade. Most peat when dug from the bog contains 90 per cent by weight of water, and the commercial process of making peat fuel involves maceration of the wet peat, moulding into bricks and drying by exposure to the air. Artificial drying in ovens or kilns is possible but is expensive. Because of the cost of preparing peat fuel and the abundance of other fuels in this country, it is probable that the use of peat for heating residences will not increase greatly in the near future.

Coke, as used in boilers and furnaces for residence heating, is obtained from two sources: (1) from the retorts of coal-gas plants as the residue left after the gas has been driven from the coal, and (2) from by-product coke plants, which are built to produce coke and to obtain gas and other by-products. The retort coke from coal-gas plants is the more commonly used for house heating, but with the increase of by-product coke ovens the use of this kind of coke is increasing. As a usual thing, however, the cost of coke per ton is higher than that of bituminous coal. This fact and the lack of information as to how coke can be burned most efficiently have been largely responsible for the clinging to other fuels. As a fuel for residence heating coke has the merit of cleanliness, but much of the heating apparatus in use is ill adapted to burning it and hence the obtaining of satisfactory results is rendered difficult if not impossible.

The love of rural life, of honest work, the habit of finding enjoyment in familiar things, is worth a thousand fortunes of money or its equivalent.—Henry Ward Beecher.

HAS AUTOMATIC DAMPER CONTROL.

The radiator of the XXth Century War Air Heater, Series D, shown in the accompanying illustration, is made all in one piece, of cast iron, and is corrugated to conform with and rests directly upon the feed section. This heater burns all kinds of fuel, even slack and cheap soft coal satisfactorily. The patent circular burner consumes all the gas and smoke. The fuel is burned from the outside toward the center. There

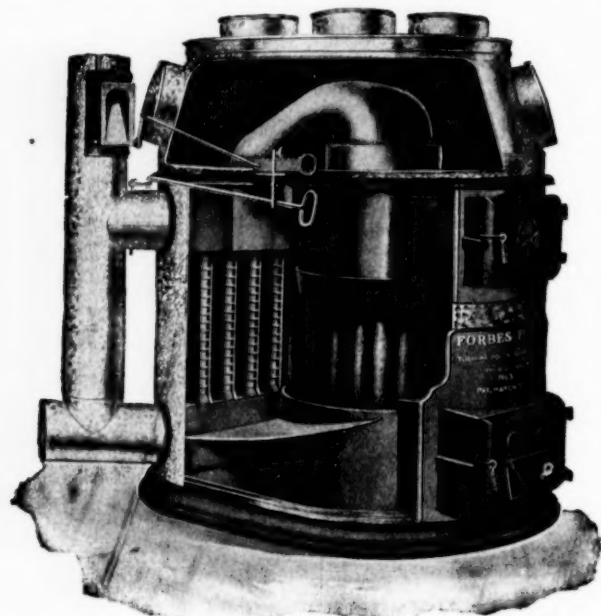


XXth Century Warm Air Heater, made by The XXth Century Heating and Ventilating Company, Akron, Ohio.

is an automatic damper and patent regulator which regulates the heat at all times and feeds it directly to the rooms from the double casings and not out the chimney. The double casings have an air space between fitted into wrought iron casing rings and allow no air suction or dirt suction. All the expanding joints in the working parts of the heater are set in the asbestos cement and then caulked with asbestos wicking which renders it impossible for them to leak gas into the circulating chamber. This heater has the improved drop-front grate which makes it easy to clean. The entire grate may be removed with ease through the large ash door. Dealers can secure catalog and further particulars by addressing The XXth Century Heating and Ventilating Company, Akron, Ohio.

RADIATING MANIFOLD SAVES COAL.

The Forbes Warm Air Heater shown in the accompanying illustration is only four feet three inches in height, which gives fine elevations to warm air pipes



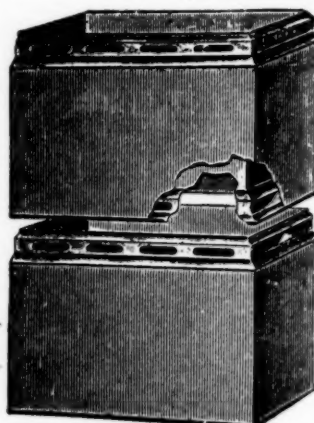
Forbes Warm Air Heater, Made by the Tubular Heating and Ventilating Company, Philadelphia, Pennsylvania.

and is particularly adapted to low cellars. It is made of all cast iron and is very easily cleaned. All the

soot formed accumulates in the upper and lower manifold boxes. By taking off two caps this may be easily removed, a scraper being furnished for this purpose. The fire pot is deep and durable. This is necessary in order that the fire may be kept for a long time without attention. The sides of the fire pot are nearly vertical but are a little larger at the bottom. The radiator has no joints and this is an important feature as the gas leaks usually occur at the top seam of a warm air heater. The improved grate rest in the Forbes warm air heater allows any bar to be removed without disturbing the others. After the removal of a cotter, either half of the rest may be lowered and each bar taken from its position. There are no bolts. The triplex grate is strong and durable and a new surface is presented to the fire at each movement of the bars. Any grate bar may be easily removed without disturbing any other bar. Dealers can secure further particulars by addressing the Tubular Heating and Ventilating Company, 228 Quarry Street, Philadelphia, Pennsylvania. •

HAS LARGE VENTILATING SPACE.

The Handy Furnace Pipe, shown in the accompanying illustration, made by F. Meyer and Brother Company, Peoria, Illinois, is made to prevent fire from overheating the wall pipes. There is a large ventilating space between the inside and outside pipe with a current of air passing between them from the basement to the top of the register head where it is discharged into the partition above. The distinctive feature of the Handy Furnace Pipe is the connecting slip. This slip is one and three-eighths inches long—said to be made longer than that of any double wall pipe. It is so arranged that it will fit together without any effort on the part of the installer and where pipes are put into old houses, this characteristic is of special value. The Handy Furnace Pipe comes in every style and size. Two lengths of pipe are sufficient for an ordinary stack, but any length can be easily made with the different short pieces or with the Handy Adjustable Joints that can be adjusted from six and a half inches to twelve inches. Dealers should address F. Meyer and Brother Company, Peoria, Illinois, for their catalog showing the different styles of stacks and their many other products.



Handy Furnace Pipe, Made by F. Meyer and Brother Company, Peoria, Illinois.

The main reason why it is useless to argue with a drunken man is because he doesn't appreciate your brains any more than you appreciate his breath.—Portland Oregonian.

There are no privileges of the press that are not the privileges of the people; any citizen has a right to tell the truth, to speak it, or write it, for his own advantage and the general welfare.—Murat Halstead.

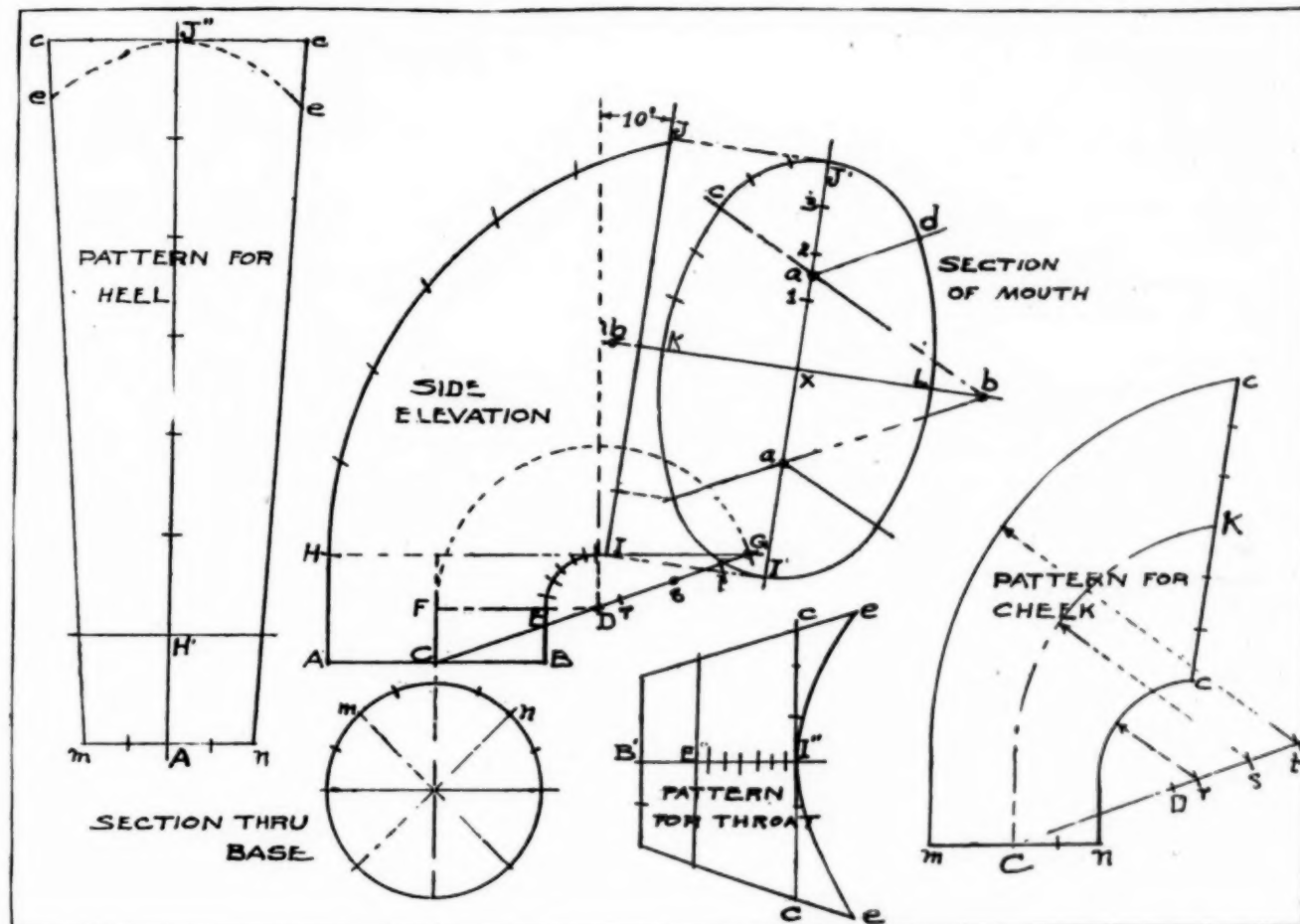
PRACTICAL HELPS FOR THE TINSMITH

PATTERNS FOR SHIP'S VENTILATOR IN SEGMENTS.

BY O. W. KOTHE.

At this time the enclosed drawing will come in very timely to many workmen. Ship ventilator articles as reviewed in the past require considerable work and are more a problem of development than of an actual

to a radius equal to D-F which is the center of base stem, and describe an arc to point G. Through point I, or the top of throat draw a line parallel to A-B as G-H. Then draw a line G-D-C which is the axis for describing the heel. Setting dividers to point G and H as radius describe the arc H-J. The distance of the overhang is made about 10 degrees which places the mouth of ventilator on 80 degrees line. Draw the line



Patterns for Ship's Ventilator in Segments.

shop fitting. In this case we will take up the shop method of developing, showing that there is not much to the development. Large ventilators are made in segments having four pieces, the two sides called the cheeks and the throat and heel. These segments are either riveted or dovetailed and brazed or welded. The gore method which we will take up later is used more for small ventilators, and are not practical for large work, the reason being the cross seams are not so strong and will not stand the wind pressure as the longitudinal ones will.

In designing a ventilator the side elevation is first considered. Place the diameter for the lower base as A-B. Make the radius for throat E-R equal to one-quarter the diameter of lower base. The straight lines on the lower base can be drawn any length to meet the quarter circle in point E. Now by setting dividers

J-I to point D, and the side elevation is finished. Observe a round circle is required for the bottom base while for the mouth I-J an oval opening is designed. It is optional with the method of development whether this section of mouth is oval or round. If oval as in this case, the width of the oval is made equal to two-thirds the length. That is K-L is made equal to two-thirds of I-J.

To describe this oval take the short diameter K-L and set as I'-I. Now divide the remainder I-J' in 3 equal parts. Pick two of these spaces as 1-3 as radius using X as center, mark points as at a and a. Then expand the dividers to a radius equal a-a and using X as center mark points as at b and b. These points give you the new centers for describing the arcs of oval. Using the centers a for describing the end arc c-J'-d and the center b for describing the side arc c-K.

etc. The divisional lines separating the different arcs can be used as seam lines for the segments which enables the workman to readily shape up the cheeks and heel and throat. A quarter of this oval is divided in equal spaces which is used for stepping off the stretch-out in the patterns.

Patterns for cheek in practice can be described over the side elevation. But in this case we lay it off over to the side. The line C-t is a reproduction of C-g of elevation. The points r and t are established by trials in this line so as to make the arcs tangent with the line. Make the base m-n equal to that quarter circumference of the section through base. Also make the angle of mouth c-c equal to that in elevation, making the length K-c equal to that stretchout in the section of mouth. Then describe the arcs from the center shown.

To obtain the heel and throat, divide the heel H-J into equal spaces and draw lines to the corner D, which also divides the throat. Pick these spaces as the girth for the heel J"-A' and on each base line measure the circumferences as c-c and m-n which gives the pattern for heel. The same holds good for pattern for throat; the length I"-B' is made equal to the length of throat in elevation. The line c-c is made twice the length of c-J' of section, which gives the side lines for pattern. Now as the heel and throat must be shaped the corners of the heel are cut off on the dotted line e-J"-e. These are best cut off after the heel has been shaped up. In the same way in shaping up the throat an extra allowance as c-e must be made equal to that space I-e in elevation. This curb e-I"-e is traced free handed. In the shaping process which will be taken up later the metal is stretched in places which always must be trimmed before assembling. So all seams must be well fitted either for dovetailing or riveting after the pieces have been shaped up and fitted. This latter will be taken up later.

ISSUES CALL FOR CONVENTION.

A call for the fifth annual convention of the Master Sheet Metal Contractors' Association of Wisconsin has been issued by Paul L. Biersach, secretary of that organization. The convention is to be held in the Colonial Room of Wisconsin Hotel, Milwaukee, Wisconsin, March 20, 1919. Mr. Biersach directs attention to the uncommon importance of the forthcoming meeting. He declares that business is entering upon a new era which requires new plans of procedure, more progressive methods of operation and closer unity between all the interests involved. No sheet metal contractor of Wisconsin can fail to attend the convention without doing himself and his business an injustice.

WANTS CATALOGS FOR TIN SHOP.

For business reasons, R. J. Webb has moved from West Salem, Wisconsin, to Lancaster, Wisconsin, where he is making preparations to establish a sheet metal shop. In order to have the best of everything in the line of equipment and supplies, he wants to get catalogs from the various jobbers and manufacturers of sheet metal products and warm air heaters.

MAKES METAL PLACQUES OF GREAT MEN.

In the accompanying illustration is shown a metal plaque of George Washington, one of the latest specialties made by the Milwaukee Corrugating Company, Milwaukee, Wisconsin. The Company also manufactures plaques of President Wilson, John F. Pershing and Abraham Lincoln. They are stamped in sharp relief and finished in various ways so that all tastes may be suited. At the present time a wave of patriotism is sweeping the country and the demand for pictures, busts, plaques, etc., of the great men



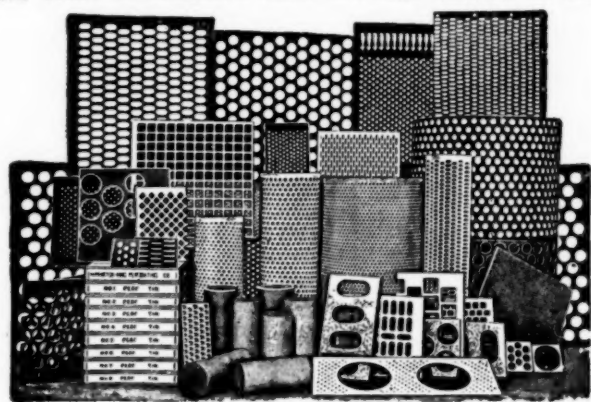
Plaque of Washington, Made by the Milwaukee Corrugating Company, Milwaukee, Wisconsin.

of the past and present is increasing. The keen appreciation of the men who have helped make history for the United States in the past is by no means dimmed by the brilliancy of our present day heroes and such metal plaques as are made by this Company are sure to satisfy the people's desire for expressing their patriotic feelings. A circular showing these reproductions in bronze has been issued by the Milwaukee Corrugating Company of Milwaukee, Wisconsin. It contains brief data in reference to the lives of these great men and dealers should write to this Company and obtain it.

PRODUCES MANY KINDS OF PERFORATED METALS FOR THE TRADE.

Perforated metals of every description are made by The Harrington and King Perforating Company of Chicago, Illinois. As shown in the accompanying illustration, their products are of every size and style. Among the wide range of their commodities are products as follows: Perforated steel plates and sheets (black or galvanized), perforated sheet copper, brass, bronze, aluminum, lead, zinc, monel metal, and other alloys; screens, plates, and sheets for ores, coal, stone, cement, and all kinds of grain cleaning and sorting apparatus for centrifugal linings, filter press plates, drying floors, false bottom strainers, extractor baskets, revolving screens, shaking screens, and chute screens:

grilles and ornamental screens for radiators, ventilators, air vents, heat vents, in private and public buildings, made to suit public requirements, perforated tin and brass in standard sizes are also carried in stock



Group of Perforated Metal Products made by The Harrington and King Perforating Company, Chicago, Illinois.

by the Company. For any information concerning perforated metals, dealers should write to The Harrington and King Perforating Company, 610 North Union Street, Chicago, Illinois.

MAKES LIBERAL USE OF ZINC.

Fitted inside and out with zinc, the office building which now is nearing completion for the New Jersey Zinc Company at the corner of Maiden lane in lower New York, presents a new departure in the use of zinc in architecture, says the Iron Trade Review. From basement to roof, zinc material is embodied in all kinds of fittings, trimmings and hardware. The design of the building follows standards of modern architecture, but in the use of zinc many innovations are introduced.

Plated door checks, frames, window sash and locks are among the more apparent ways in which zinc is employed. Flashings, gutters and all other outside work are made of rolled zinc, this material having been substituted for copper. Entrance and vestibule doors are constructed of sheet zinc rolled on wood. The knobs and locks are made of zinc plate, a detail that is embodied throughout. Zinc composition is used in the hinges. Side walls of the elevators immediately inside are of zinc construction. Likewise, the elevator doors and bell plates are zinc coated, giving a rich satin finish. All of the window hardware is manufactured from zinc plate. This includes sash, locks and handles. Grilles for the registers of the ventilating system were first stamped and then zinc plated. Floors are of marble, while steel railings are found on almost every floor. Partitions are made of steel, and have a natural hardwood finish.

In the interior fixtures zinc materials are consistently employed. This metal is used in the hardware, including trimmings and fittings of the mail chute. Some of the panel doors enclosing cutout boxes, enunciator boxes and all low-tension work in the electrical equipment are made of zinc plate. The lighting fixtures are also zinc plate, while frames for the illuminating lamps are spun from rolled zinc sheets. Ornaments that are to be found throughout the building have been cast from zinc.

Many of the furnishings to be used are designed to be in keeping with the structural features of the edifice. These include desk fittings and office supplies, all of the materials for which are products of the tenant corporation. This applies even to the window shades, which contain lithopone in their construction.

NOTES AND QUERIES.

Address of Good Manufacturing Company.

From C. R. Oberholtzer, Angola, Indiana.

Will you kindly give me the address of the Good Manufacturing Company, who make plumbers' supplies?

Ans.—They are located at 305 East 134th Street, New York City.

Milking Machines for Small Dairies.

From the Carlton Hardware Company, Calumet, Michigan.

Please advise us who manufactures milking machines for small dairies.

Ans.—Sharples Separator Company, West Chester, Pennsylvania; Success Milking Machine Company, 709 Chestnut Street, Milwaukee, Wisconsin; Universal Milking Machine Company, 18 West Mound Street, Columbus, Ohio; and Wisconsin Sanitary Cow Milk-ers Company, Watertown, Wisconsin.

Circular Saw.

From The Forest City Summit, Forest City, Iowa.

Will you give us the name of a manufacturer of a circular saw on an iron table or stand to which could be attached a motor for driving the saw by power?

Ans.—Henry Disston and Sons, Incorporated, Philadelphia, Pennsylvania; and E. C. Atkins and Company, Incorporated, Indianapolis, Indiana.

Stamped Sheet Metal Ware.

From William Warnock Company, 607 Douglas Street, Sioux City, Iowa.

Can you tell us who makes stamped sheet metal ware?

Ans.—Lalace and Grosjean Manufacturing Company, 1900 South Clark Street; National Enameling and Stamping Company, 346 West Kinzie Street; and Republic Metalware Company, 1532 Wabash Avenue; all of Chicago.

Soldering Flux.

From Edward Thiel, 213 Washington Street, Hibbing, Minnesota.

I would like to know where I can get soldering flux.

Ans.—L. B. Allen Company, Incorporated, 4555 North Lincoln Street, Chicago; and George E. Roesch, 386 New York Street, Aurora, Illinois.

Taps and Dies for Wood.

From Fey and Fey, Delavan, Wisconsin.

Kindly inform us where we can get taps and dies for wood.

Ans.—Murchey Machine and Tool Company, 621 Washington Boulevard, Chicago, can furnish these.

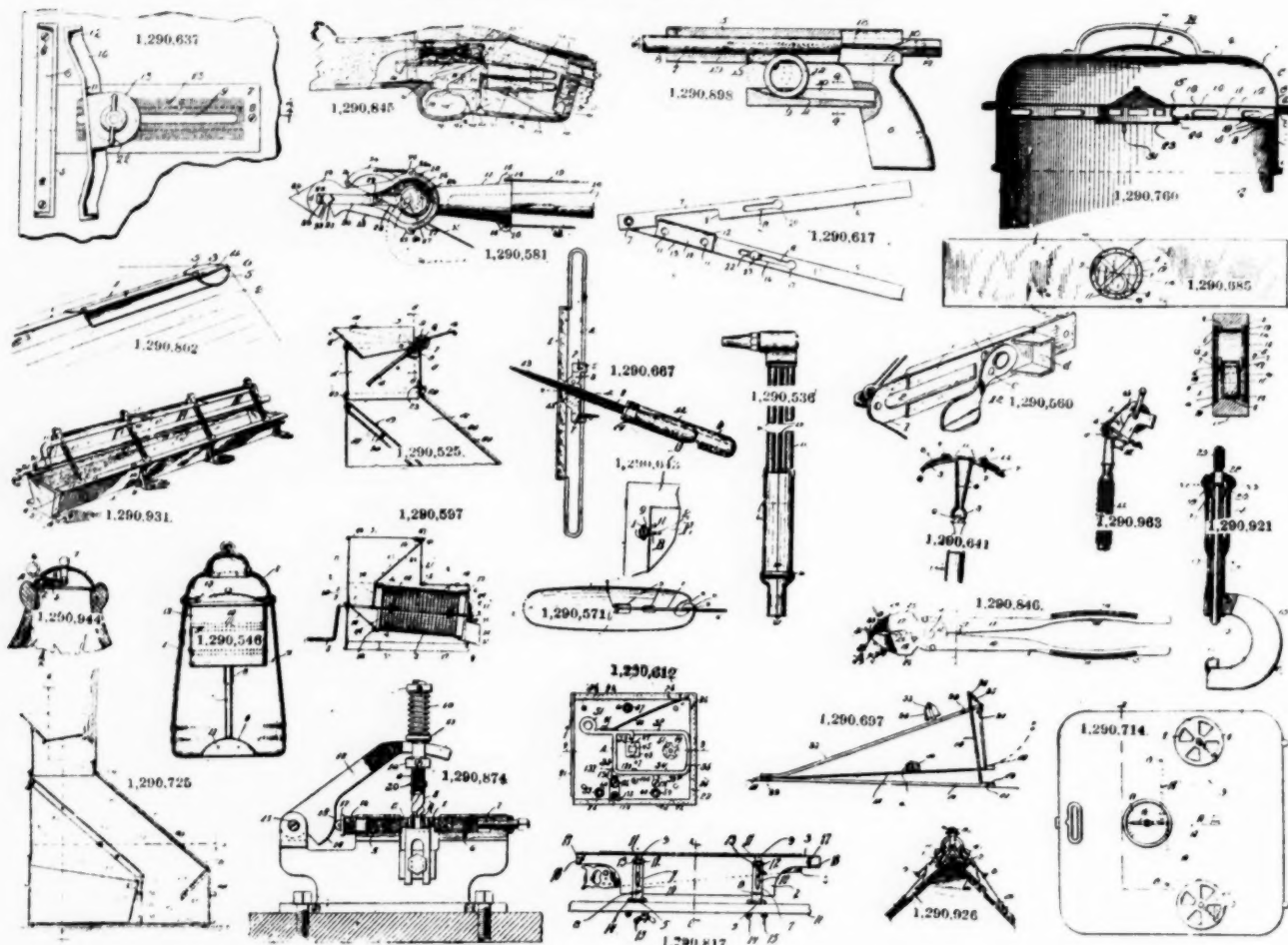
Tin Cans.

From Acuff Sheet Metal Works, 136 North Lawrence Avenue, Wichita, Kansas.

We would like to know where we can obtain quart and other size tin cans with the ordinary pressed air tight cover.

Ans.—American Can Company, 104 South Michigan Avenue; Chicago Metal Manufacturing Company, 313 South Clinton Street, and Continental Can Company, 2201 South Halsted Street; all of Chicago.

NEW PATENTS.



1,290,525. Ash-Sifting Apparatus. Charles M. Drinkwater, Kokomo, Ind. Filed Dec. 20, 1917. Renewed Sept. 24, 1918.

1,290,536. Cutting and Welding Torch. Sven W. Fransson, Brooklyn, N. Y. Filed Aug. 29, 1917.

1,290,546. Percolator. Frederick Hachmann, St. Louis, Mo., assignor of one-half to Fred C. Schoenthaler, St. Louis, Mo. Filed March 6, 1917.

1,290,560. Door-Fastener. Allen B. Howard, Staten Island, N. Y. Filed June 24, 1916.

1,290,571. Bait-Spoon. Utakichi Kawasaki, San Francisco, Cal. Filed May 8, 1918.

1,290,581. Wire-Cutter. Peter Kozbial, Lathrobe, Pa. Filed Sept. 10, 1918.

1,290,597. Sifter. Moses Lieberman, West Orange, N. J., assignor to Baldor Metal Works, Inc., West Orange, N. J. Filed Feb. 14, 1918.

1,290,612. Key-Operated Lock. Jacob Luter, Bayonne, N. J. Filed Oct. 22, 1917.

1,290,617. Razor-Stropping Device. James H. MacBride, Taft, Cal. Filed Aug. 31, 1918.

1,290,637. Bench-Clamp. Frank R. Moore, Cuyahoga Falls, Ohio. Filed May 24, 1918.

1,290,641. Safety-Razor. Frederick M. Munroe, Huntington, N. Y. Filed May 6, 1918.

1,290,643. Pneumatic Door-Check. Hjalmer A. Nelson, St. Paul, Minn., assignor of one-third to George E. Westergren and one-third to Erick L. Anderson, St. Paul, Minn. Filed Dec. 15, 1916.

1,290,667. Saw-Filling Device. James J. Sanford, Newark, N. J. Filed Sept. 19, 1917.

1,290,685. Combined Level and Plumb. Harlie A. Townsley, Baltimore, Md. Filed March 6, 1917.

1,290,697. Animal-Trap. Joe Banashi, Indianapolis, Ind. Filed Aug. 24, 1918.

1,290,714. Draft-Regulator. Annie M. Causey, Malvern, Ark. Filed July 2, 1917.

1,290,725. Ash-Sifting Apparatus. Charles M. Drinkwater, Kokomo, Ind. Original application filed Dec. 20, 1917. Divided and this application filed April 29, 1918.

1,290,760. Fly-Trap Garbage-Cover. Fred Langhein, Newark, N. J. Filed June 4, 1918.

1,290,802. Ridge-Roll Starter. James Daniel Tennison, Texarkana, Ark. Filed July 13, 1918.

1,290,817. Saw-Clamp. John Well, Spokane, Wash. Filed Jan. 17, 1918.

1,290,845. Firearm. John H. Redfield, Denver, Colo. Filed Jan. 20, 1912.

1,290,846. Staple-Extracting Tool. Josiah Smith, Fremont, Ohio. Filed April 16, 1917.

1,290,874. Metal-Working Machine. Walter W. Baker and Frederick W. Franklin, Syracuse, N. Y. Filed Aug. 26, 1916.

1,290,898. Gun. Leslie H. Burlin, Oak Park, Ill. Filed June 18, 1917.

1,290,921. Micrometer-Calipers. Joseph Allan Davidson, Indianapolis, Ind. Filed April 30, 1918.

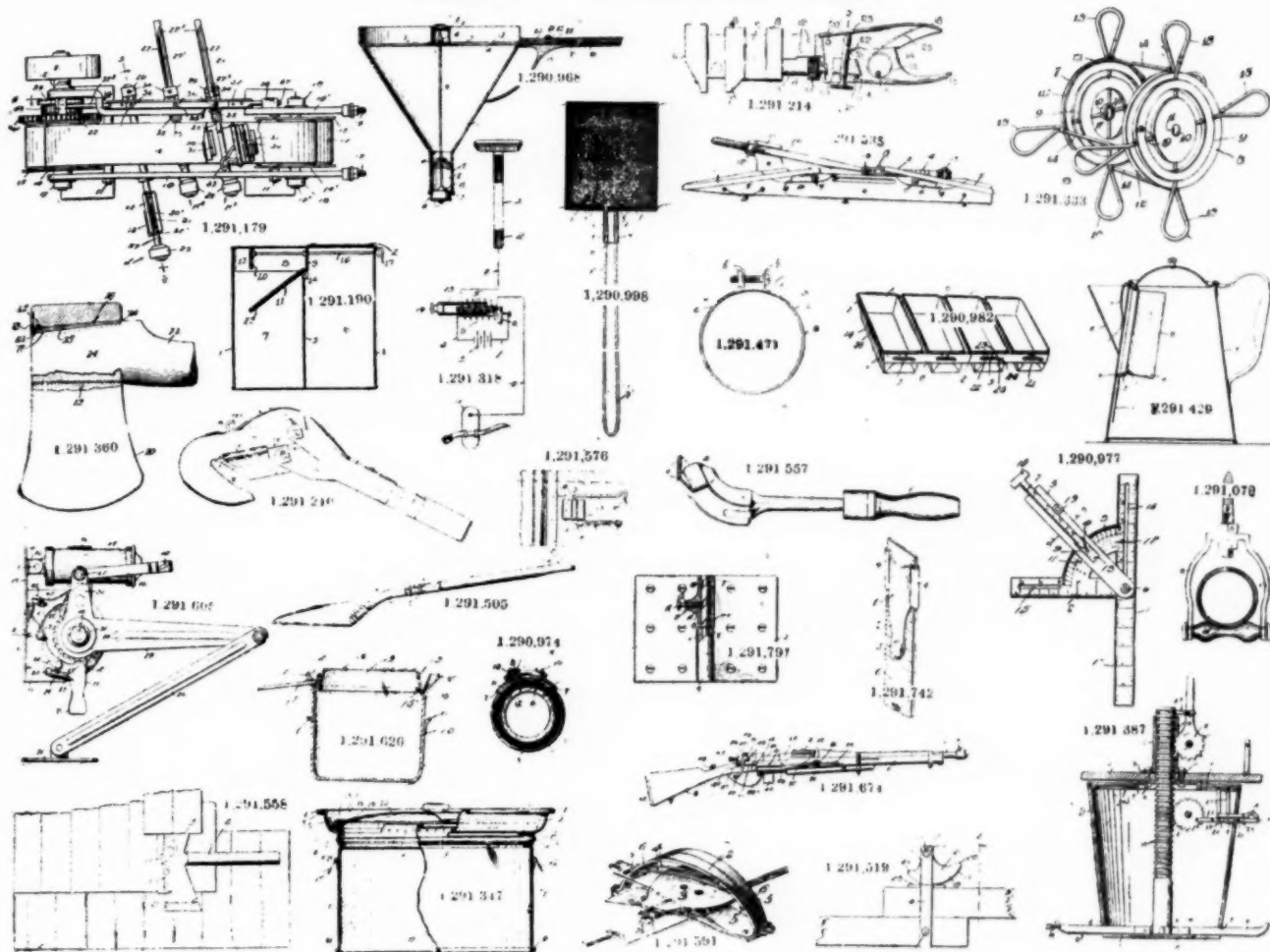
1,290,926. Roof-Jack. Sharp Decker, Lovejoy, Pa., assignor of one-half to Robert W. St. Clair, Lovejoy, Pa. Filed May 2, 1918.

1,290,931. Sanitary Hog-Trough. John Dobry, Cedar Rapids, Iowa. Filed Feb. 25, 1918.

1,290,944. Milk-Bottle Cap Remover. James F. Einfeldt, San Francisco, Cal. Filed March 12, 1918.

1,290,963. Safety-Razor. Franz A. Fuller, Newark, N. J. Filed May 8, 1915. Renewed June 8, 1918.

NEW PATENTS.



1,290,968. Funnel. William Lane Gillette, Flagtown, N. J. Filed Jan. 7, 1918.

1,290,974. Hose-Coupling. Benjamin F. Gragg, Louisville, Ky., assignor of one-half to Julian R. Fisher, Louisville, Ky. Filed July 14, 1917.

1,290,977. Measuring-Tool. Saunders T. Greene, Dallas, Tex. Filed July 5, 1918.

1,290,982. Baking-Pan. Harry J. Haigh, Staple, N. Y. Filed April 10, 1917.

1,290,998. Insect-Swatter. Robert L. Horsley, Memphis, Tenn., assignor to Compress Buckle Company, Fort Worth, Texas. Filed May 13, 1918.

1,291,079. Pipe-Hanger. Thomas J. Morris, Springfield, Mass. Filed June 10, 1915. Serial No. 33,314.

1,291,179. Safety-Razor Sharpener. Charles Schaumburg, Seattle, Wash., assignor to The Handy Manufacturing Co., Seattle, Wash. Filed Feb. 7, 1918.

1,291,190. Ash-Sifter. Frederick W. Seeman, Detroit, Mich. Filed Nov. 18, 1915.

1,291,210. Wrench. Joseph B. Skiff, Fort Dodge, Iowa. Filed Feb. 23, 1918.

1,291,214. Wrench. Furmon S. Smith, Grants Pass, Ore. Filed May 11, 1918.

1,291,318. Razor. Frank White, St. Louis, Mo. Filed June 8, 1916.

1,291,333. Knockdown Reel. Reuben D. Wirt, Philadelphia, Pa. Filed Aug. 30, 1918. Serial No. 252,016.

1,291,347. Boiler. Henry W. Zimmermann, Cincinnati, Ohio. Filed April 1, 1918.

1,291,360. Ax. Purl Babcock, Redwood, N. Y. Filed Aug. 5, 1916.

1,291,387. Hose-Reel. Ernest C. Bragg, Baltimore, Md. Filed Oct. 16, 1918.

1,291,420. Coffee-Strainer. Louis Daniels, New York, N. Y. Filed Aug. 6, 1918.

1,291,471. Hose-Clamp. Frank M. Funk, Detroit, Mich. Filed July 8, 1918.

1,291,505. Shovel-Handle. George Hecox, Springfield Center, N. Y. Filed July 27, 1916.

1,291,519. Clamp. Jesse E. Hodges, Covington, Ky. Filed Oct. 15, 1915.

1,291,538. Wire-Splice. Silas Raymon Jones, Coeburn, Va., assignor of one-half to Clinton M. Wolfe, Coeburn, Va. Filed June 19, 1918.

1,291,557. Soldering-Iron. Herman H. Krueger, Chicago, Ill. Filed Nov. 7, 1917.

1,291,558. Shingling-Gage. Gavin J. Lang, Des Moines, Iowa. Filed April 24, 1917.

1,291,576. Door-Hook. John McCormick, Northville, S. D. Filed Feb. 6, 1918.

1,291,591. Animal-Trap. Oscar G. Meredith, East Goshen township, Chester county, Pa., assignor of one-third to Harry F. Taylor, East Goshen township, Pa., and one-third to Neville Hunsberger, Philadelphia, Pa. Filed March 26, 1918.

1,291,605. Door Check and Closer. William J. Neidl, New Britain, Conn. Filed Aug. 23, 1917.

1,291,620. Sanitary Cooking Vessel. Olaf M. Olsen, Brooklyn, N. Y. Filed June 19, 1917.

1,291,674. Rifle. Virgil C. Brannon, Fort Stockton, Tex., assignor of one-half to Joseph L. Mayfield, Wichita Falls, Tex. Filed Feb. 14, 1917.

1,291,742. Slide for Rules. William J. Bousquet, Springfield, Mass. Filed June 4, 1918.

1,291,791. Door-Hinge. Lyman Dodge, Newburyport, Mass. Filed March 7, 1918.

WEEKLY REPORT OF TRADE AND THE MARKETS

DOMESTIC AND FOREIGN INQUIRIES, COMING IN GREATER NUMBERS, ENCOURAGE STEEL TRADE.

The increased number of domestic and foreign inquiries encourages the steel trade to expect a much earlier resumption of business than the situation heretofore had justified. There was no diminution in orders placed during the week, and in some lines they were larger, but the volume of business is not yet of satisfactory proportions. Iron and steel men are paying little attention to frequent rumors that there will be general declines all along the line by April 1. It is well known that reductions can be effected readily in the steel industry by one or two interests taking the lead in announcing reductions and others will follow them as in the last reduction.

Opinion concerning the practical value of another period of fixed, or "stabilized" prices is divided. The investigation of costs proposed under the plan suggested by the Secretary of Labor began with the steel trade, and it is expected that on account of the data already on hand the work soon will be complete. There is no special objection to the Government certifying that the prices agreed upon are "reasonable." The only question in the minds of the trade is whether the plan will prove effectual. If it does not, the belief is that it may lead to new complications that will further interfere with "natural" readjustment.

Trade leaders advised the continuance of price control right after the signing of the armistice and were of the opinion then that it would help in restoring confidence to buyers. Now, they doubt whether the Government label on prices would induce "investment" buyers to enter the market. Unless the plan is an instant success they say it will do more harm than good.

Trade opinion is that the stagnation reported generally is due primarily to "psychology" and will disappear when buyers adjust themselves to changed conditions. A new element introduced in the form of artificial price-fixing might easily lead to another period of "waiting," which naturally would be harmful.

There are signs that the business machinery of the country has already reached a degree of readjustment and that the slightest encouragement will be sufficient to restore confidence and a resumption of work. The question of prices after all is considered a relative question, and once the public quits thinking about what it pays and thinks more about what is to be done in the world to restore it to anything like what it was before June, 1914, the steel trade feels assured business will hum.

The improved export outlook, the trade believes, will have a direct bearing on the resumption of busi-

ness in this country. The fact that the trade has been able to compete in foreign markets against English makers is considered a fair indication that prices in this country are not too high. The price level in this country will have to approximate that in the rest of the world if trade ever is to reach an important volume, it is contended, and this fact will largely control the domestic situation.

STEEL.

Aid of large steel purchasers of Chicago was enlisted this week when the Purchasing Agents' Association of Chicago, at the Hotel LaSalle, pledged cooperation to the Western Association of Rolled Steel Consumers in the battle to make Chicago a price fixing point on rolled steel, and thus end the present differential favorable to Pittsburgh of \$5.40 per ton. Chairman James B. MacMurray of the Rolled Steel organization, quoted Judge Gary to the effect that steel is made in the Chicago district more than 18 per cent cheaper than in Pittsburgh.

COPPER.

There is still no life to the copper market, and although the metal is steadily offered down by smaller concerns consumers are not especially attracted and continue to pick up occasional lots when offered lower.

Tuesday of this week small lots were obtainable at 15 cents, while producers are still holding for 15½ cents. The general impression in the trade is that the price of 15 cents is pretty near the bottom, and that any sizeable buying would not find many sellers at this price.

The question as to what action the Government will take about disposing of its surplus makes buyers shy. This stock is about 140,000,000 pounds and cost 26 cents, and at say 15 cents will show the Government a loss of \$15,000,000. This is a small item compared with the damage the trade is suffering from uncertainty regarding these stocks.

It is not generally realized how drastically the price of copper has declined, 26 cents to 15 cents, in less than four months, and how much the change that the end of the war made in demand has been discounted. With the first signs that the decline has stopped a big demand is likely to arise. Too many changes have taken place in labor and costs to justify a belief in a return to pre-war basis prices.

TIN.

Conditions in the market for tin are still governed by the fixed price of 72½ cents for Straits spot tin, under which the Government holdings have to be sold. This price is considered as too high by consumers, as the present market price in London is around 45 cents. In consequence, present business in tin is confined to

small lots only, as no consumer is willing to stock up at the high price of $72\frac{1}{2}$ cents. As imports of Bolivian tin ore are also forbidden, the offerings of the refined grade of Bolivian tin will soon be abolished. The present price is $68\frac{1}{2}$ cents.

There is no improvement in demand and as there is known to be still quite a quantity of comparatively cheap outside tin on the market the assumption is that the Government stock, in the hands of the U. S. Steel Products Company, is being reduced very slowly indeed and this may force the authorities to adopt some new rules or restrictions (licenses to purchase are already being withheld on the larger quantities), for otherwise the demoralized conditions will continue indefinitely. It is believed that only 4,000 tons out of the 10,000 tons imported have been distributed, going chiefly to the tin plate makers and other very large consumers. The general metal trade did not respond to the suggestion of taking their allocation, chiefly because their demand is influenced by trade which has been adversely affected by the high price of tin. These buyers show no eagerness for the pure tin offering for spot delivery at around 68 cents and can hardly be expected to find use for the same grade of metal at $4\frac{1}{2}$ cents per pound higher.

LEAD.

A firm basis in price appears to have been reached by the drastic cut in market quotations of lead, and it is believed that gradual restoration toward normal prices and conditions will go forward without serious interruptions. The St. Louis market is strong at 5.15 cents.

SOLDER.

Prices of solder in the Chicago market are as follows: Warranted 50-50, per pound, 39.5 cents; Commercial, per pound, 45-55, 36.2 cents; Plumbers', per pound, 32.9 cents.

SPELTER.

From Oklahoma comes the announcement that a large number of the zinc smelters have closed down additional smelting capacity in an effort to stabilize the spelter market. Ore producers have feared that this would mean a reduction in the demand for zinc ores, but the very opposite seems to have been developed in the local district.

A severe decline in copper has brought nearer a resumption of business in brass, but on account of the inevitable decline in iron and steel not having yet taken place, the galvanized iron demand is "up in the air," the demand for this commodity being only for immediate urgent demands. Until a basis in price for galvanized iron is reached that inspires confidence, buyers will not contract for future deliveries.

The galvanized iron mills are estimated to be running about 40 per cent of capacity and some are entirely closed down in their galvanizing departments. Spelter is quoted at $6.27\frac{1}{2}$ cents, St. Louis basis.

SHEETS.

The sheet market is described as being firmly maintained all along the line. Current bookings are not heavy except from the automobile industry, which is

buying very freely indeed, and will probably take deliveries of a larger tonnage of sheets during the present half year than in any previous half year. The automobile shops are not yet up to normal rate of car production, but they probably will be soon, and in any event they have occasion to build up their stocks, it being normal practice to have supplies of steel well ahead.

There is quite a fair demand for sheets from the agricultural implement makers, but this demand never runs into a very large tonnage.

Demand for sheets in connection with the building trades is very light, the chief call being in connection with repair jobs.

Sheet mill operations are about the same as formerly, the American Sheet and Tin Plate Company operating its mills at about 80 per cent of capacity, while the independents are averaging somewhat under 70 per cent. Today the American company is operating 79 per cent of its sheet mill capacity. At no less than nine of its plants automobile sheets, apart from blue annealed, are being made in larger or smaller quantities. When the company first engaged in making automobile sheets the production was confined to two plants.

TIN PLATE.

A marked improvement of the situation has taken place in the tin plate market. Not only are specifications against unfilled orders coming forward quite freely, but new orders are more frequent if not individually larger. Manufacturers are firmly maintaining prices on a basis of 7.35 cents per base box. Pittsburgh. Talk of sales at a price below the market has practically ceased; in fact, one Chicago packer whose purchasing agent recently was actively trying to "bear" the market has placed a fair sized order in the past few days.

OLD METALS.

Wholesale quotations in the Chicago district, which may be considered nominal, are as follows: Old steel axles, \$28.00 to \$30.00; old iron axles, \$28.00 to \$30.00; steel springs, \$17.00 to \$17.50; No. 1 wrought iron, \$15.00 to 15.50; No. 1 cast, 20.00 to \$21.00, all net tons. Prices for non-ferrous metals are as follows, per pound: Light copper, $10\frac{1}{2}$ cents; light brass, 6 cents; lead, $3\frac{1}{2}$ cents; zinc, $3\frac{3}{4}$ cents; cast aluminum, 17 cents.

PIG IRON.

The dull period in the pig iron trade shows no sign of immediate change, and the market seems to be growing even more sluggish. Few inquiries have been received lately, and business under negotiation is of small volume only. With the exception of occasional sales of carload lots in practically all grades of pig iron, the different centers of the industry report a featureless market. Producers of spiegeleisen still are encountering considerable competition from resales by consumers, some making reports they are forced in some instances to compete with their own product. Ferro manganese is also offered in resale tonnage, 70 per cent metal may be had at \$150.

Current Hardware and Metal Prices.

AMERICAN ARTISAN AND HARDWARE RECORD is the only publication containing Western Hardware and Metal prices corrected weekly.

METALS.	LEAD.	AUGERS	BEATERS.
	American Pig.....\$5 1/2	Boring Machine.....60%	Carpel. Per doz.
	Bar.....6 1/2	Irwin's.....25%	No. 7 Tinned Spring Wire...\$1 10
	Sheet.....	Carpenter's Nut.....50%	No. 8 Spring Wire coppered...1 50
	Full coils.....per 100 lbs. \$9 00		No. 9 Preston.....1 75
PIG IRON.	Cut coils.....per 100 lbs. 9 25		
Basic.....\$34 40		Hollow.	Egg. Per doz.
Northern Fdy., No. 2.....34 00	TIN.	Bonney's.....per doz. 30 00	No. 50 Imp. Dover.....\$1 10
Southern Fdy. No. 2.....40 25	Pig tin.....76 1/2	Stearns, No. 3.....60 00	No. 102 " " tinned...1 35
Lake Sup. Charcoal.....38 70-39 00	Bar tin.....Nominal		No. 150 " " hotel...2 10
Malleable.....34 50		Post Hole.	No. 10 Heavy hotel tinned...2 10
		Iwan's Post Hole and Well.....25%	No. 13 " " " " 3 30
		Vaughan's, 4 to 9-in. per doz.\$13 00	No. 15 " " " " 3 60
			No. 18 " " " " 4 50
FIRST QUALITY BRIGHT	HARDWARE.		
TIN PLATES.		Ship.	Hand. 8 9 10 12 *
	ADZES.	Ford's, with or without screw, Net list	Per doz.\$11 50 13 00 14 75 18 00
IC 14x20.....112 sheets Per box	Carpenters'.		Moulders'.
IX 14x20.....15 75	Plumbs.....Net		12-inch.....Per doz. 20 00
IXX 14x20.....17 55	Coopers'.	AWLS.	BELLS.
IXXX 14x20.....18 80	Barton's.....Net	Brad.	Call.
IXXXX 14x20.....20 10	White's.....Net	No. 3 Handled.....per doz. \$0 65	3-inch Nickeled Rotary Bell,
IC 20x28.....28 20	Road.	No. 1050 Handled.....1 40	Bronzed base.....per doz. \$5 50
IX 20x28.....31 50	Plumbs.....Net	Shouldered, assorted 1 to 4.	
IXX 20x28.....35 10		Patent asst'd, 1 to 4.....4 00	
IXXX 20x28.....37 60			Coar.
IXXXX 20x28.....40 20			Kentucky.....30%
COKE PLATES.	AMMUNITION.		Door. Per doz.
Cokes, 180 lbs.....20x28 \$17 70	Caps, Percussion—per 1,000.		New Departure Automatic...\$ 7 50
Cokes, 200 lbs.....20x28 18 00	F. L., Waterproof, 1-10s...20&2 1/2%		Rotary.
Cokes, 214 lbs.....IC 20x28 18 60	G. D.....20&2 1/2%		3-in. Old Copper Bell.....6 00
Cokes, 270 lbs.....IX 20x28 21 00	Musket.....20&2 1/2%		3-in. Old Copper Bell, fancy...8 00
			3-in. Nickeled Steel Bell...6 00
BLUE ANNEALED SHEETS.	Shells, Loaded.		3 1/2-in. Nickeled Steel Bell...6 50
No. 10.....per 100 lbs. \$5 17	Loaded with Black Powder. 20&2 1/2%		
No. 12.....per 100 lbs. 5 22	Loaded with Smokeless Powder,		Hand.
No. 14.....per 100 lbs. 5 27	medium grades.....20&2 1/2%		Hand Bells, polished.....15%
No. 16.....per 100 lbs. 5 37	Loaded with Smokeless Powder,		White Metal.....15%
	high grade.....20&2 1/2%		Nickel Plated.....10%
ONE PASS COLD ROLLED BLACK.	Winchester.		Swiss.....15%
No. 18-20.....per 100 lbs. \$6 02	Smokeless Repeater Grade. 20&2 1/2%		Silver Chime.....10%
No. 22-24.....per 100 lbs. 6 07	Smokeless Leader Grade.....20&2 1/2%		
No. 26.....per 100 lbs. 6 12	Black Powder.....20&2 1/2%		Miscellaneous.
No. 27.....per 100 lbs. 6 17			Church and School, steel alloys...30%
No. 28.....per 100 lbs. 6 22			Farm, lbs. 40 50 75 100
			Each.....\$3 00 3 75 5 50 7 25
GALVANIZED.	U. M. C.	AXES.	BEVELS, TEE.
No. 16.....per 100 lbs. \$6 82	Gun Wads—per 1000.	Boys' Handled.	Stanley's rosewood handle, new
No. 18-20.....per 100 lbs. 6 97	Winchester 7-8 gauge.....\$2 25	Niagara.....12 50	list.....Nets
No. 22-24.....per 100 lbs. 7 12	" 9-10 gauge.....1 94		Stanley's iron handle.....Nets
No. 26.....per 100 lbs. 7 27	" 11-28 gauge.....1 63		
No. 27.....per 100 lbs. 7 42	Powder. Each		BINDING CLOTH.
No. 28.....per 100 lbs. 7 57	DuPont's Sporting, kegs.....\$11 25		Zincd.....55%
No. 30.....per 100 lbs. 8 07	" " 1/4 kegs.....5 90		Brass.....40%
	" " 1/2 kegs.....3 10		Brass, plated.....60%
POLISHED SHEET STEEL.	DuPont's Canisters, 1-lb.....56		
No. 24.....per 100 lbs. \$7 82	" " 1-lb.....32		
No. 26.....per 100 lbs. 7 87	" " 1-lb.....22		
No. 27.....per 100 lbs. 7 92	" " 1-lb.....22		
No. 28.....per 100 lbs. 8 02	" " 1-lb.....22		
	" " 1-lb.....22		
SMOOTH SHEET STEEL.	" " 1-lb.....22		
Per 100 lbs.	" " 1-lb.....22		
Wood's Smooth No. 20.....\$7 27	" " 1-lb.....22		
" " No. 22-24.....7 32	" " 1-lb.....22		
" " No. 25-26.....7 37	" " 1-lb.....22		
" " No. 27.....7 42	" " 1-lb.....22		
" " No. 28.....7 52	" " 1-lb.....22		
PATENT PLANISHED SHEET			
IRON.			
Patent Planished Sheet Iron,			
100 lbs., base No. 28.....\$11 55			
BAR SOLDER.			
Warranted, 50-50.....per lb. 39.50c			
Commercial, 45-55....." 36.20c			
Plumbers'....." 32.90c			
SPELTER.			
In slabs.....7c			
SHEET ZINC.			
Cask lots.....13c			
Less than cask lots.....13 1/2c to 13 3/4c			
COPPER.			
Copper sheet, base.....24 1/2c			

BLACKING, STOVE. (See Polish)		Well.		Picture Chains.		Saw Filers.	
BLADES, SAW.		Oak, Wrought Iron Riveted		Light Brass, 3 ft. per doz. \$1 25		Wentworth's, No. 1, \$12.50; No. 2, \$18.25. No. 3, \$16.25.	
Butchers'.		Top Ears. per doz. \$8 00		Heavy Brass, 3 ft. " 1 75			
Standard, 1 & 1 1/2-in. Nets		BURRS, RIVETING.					
Clock Spring. "		Copper Burrs only. 25% above list					
Star. "		Tinners' Iron Burrs only. 30%					
Hack.		BUTTS.		Safety Chain.		CLAWS, TACK.	
Atkins. 5%		Cast Iron. 7 1/2%		Brass. 5%		Wood hdl. No. 10. per doz. \$0 95	
Star. Nets		Wrought Brass (New List). Plus 5%				Forged steel, wood hdl. \$1 75	
Wood.		Wrought Steel, Bright. 40%				Solid steel. " 2 40	
Disston		Wrought Steel, Japaned. Net prices				Giant. " 50	
Nos. 6 66 26		CALIPERS.		Sash Chain. (Morton's)		CLEANERS.	
\$8 00 \$8 50 \$8 00		Double. Nets		Steel, per 100 ft.		Drain.	
Atkins		Inside and Outside. "		0. \$2 50		Iwan's Adjustable. 40%	
Nos. 2 14 18		Wing. "		2. 3 10		Iwan's Stationary. 30%	
\$3 85 \$6 50 \$4 75		CALKS.		1. 3 60		Pot.	
BLOCKS.		Logger's Boot.		Champion Metal.		Wire. per doz. \$0 75	
Snatch.		(Lufkin R. Co.'s), per M. \$7 00		0R. 5 40		Side-Walk.	
Wooden. Plus 10%		Toe.		2R. 5 60		Steel. per doz., Net prices	
Tackle.		Blunt and medium, 1 prong, per 100 lbs. \$6 00		1R. 7 75		CLEAVERS.	
Iron Strapped. Plus 10%		Sharp, 1 prong, per 100 lbs. 6 50				Family.	
BOARDS.		CANS.		Champion Metal—Extra Heavy.		Beatty's, inch 7 8 9 10	
Store.		Milk.		1H. 9 50		Per doz. \$27 00 29 00 33 00 36 00	
Wabash Crystal. Net Prices		Elgin.		Cable Sash Chains.		CLEAVISES.	
Wabash Oriental. "		Gals. 5 8 10		Steel. List Net Plus 15%		Malleable. 10c lb.	
Wabash Mosaic. "		Each. \$4 00 \$5 15 \$5 15				CLIPPERS.	
Wabash Delft Enameled. "		Iowa Pattern.				Bolt. \$2 25 & 6 00	
Wabash Art Inlay. "		Gals. 5 8 10				CLIPS.	
Wash.		Each. \$4 00 \$5 15 \$5 15				Axle.65 & 5%	
No. 760, Banner Globe, (single)		CAN OPENERS.		CHALK, CARPENTERS'		Damper.	
per doz. \$5 25		See Openers.		Blue. per gro., \$1 50		Standard. per doz. 70c	
No. 652, Banner Globe, (single)		CAPS, GUN.		Red. " 1 50		Troy. 38c	
per doz. 6 75		See Ammunition.		White. " 1 45		Hame. 50c	
No. 801, Brass King. 8 25		CARPET STRETCHERS.		Common White School		CLOTH.	
No. 860, Single—Plain Pump 6 25		See Stretchers.		Crayon. 25c		Emery.	
BOBS, PLUMB.		CARRIERS.		CHARCOAL.		Star. New Prices	
Carpenters'.		Hay.		In bags. per bag \$1.70		B. & A. "	
No. 2, iron. per doz. \$1 15		Diamond, Regular. each, Nets		CHECKS, DOOR.		Hardware Wire—	
No. 00. 1 90		Diamond, Sling. "		Blount. Net list		Full rolls (100 ft.) Prices on application	
No. 0. 3 85		CARTRIDGES.		Corbin. "		12 Mesh, galvanized. "	
No. 3, lead. 4 35		See Ammunition.		CHIMNEY TOPS.		14 " " " " " "	
No. 4. 6 00		CATCHERS, GRASS.		Iwan's Volcano. 40%		16 " " " " " "	
No. N30, nickel plat'd. 2 40		No. 160S, per doz. \$12 25		Box.		18 " " " " " "	
No. 5, brass. 5 25		No. 165S, " 14 01		Inches. 12 14		Screen Wire. Prices on application.	
BOLTS.		Common Plate.		Round, per doz. \$5 25 5 75		12 mesh, painted, per 100 sq. ft.	
Carriage, Machine, etc		Brass Wheel. 15%		Flat, per doz. 7 25 8 25		COLLARS, STOVE PIPE.	
Carriage, 1/2x6 and sizes smaller, and shorter. 40%		Iron and porcelain wheels, new list. 50%		Good quality, 1/2 in. and larger. per lb. 28c		Lacquered.	
Carriage, sizes larger and longer than 1/2x6. 20&5%		Philadelphia Plate, new list. 50%		Smaller size, per doz. Nets		Inches 5 6 7	
Machine, 1/2x4 and sizes smaller and shorter. 40&10%		Martin's. 40%		Socket, Firmer.		Fancy pattern, per doz. 80c 85c \$1 15	
Machine, sizes larger and longer than 1/2x4. 25&5%		CASTERS.		Ohio. Price on Application		COMPASSES.	
Stove. 60&10%		Standard—Ball Bearing. 50&10%		Socket, Framing.		Carpenters'. 15%	
Tire. 40%		Bed. 55%		Ohio. Price on Application		COPPER—See Metals.	
Mortise, Door.		Common Wheel. 15%		Tanged, Firmer.—Barton's.		COPPERS—Soldering.	
Gem, iron. 5%		Iron and porcelain wheels, new list. 50%		With handles. Net list		3 lb. and heavier. per lb. 55c	
Gem, bronze plated. 5%		Philadelphia Plate, new list. 50%		Choppers, See Cutters, Metal.		24 lb. 56c	
Barrel.		Martin's. 40%		CHUCKS, DRILL.		2 lb. 57c	
Cast. Nets		CATCHERS, GRASS.		Goodell's, for Goodell's Screw Drivers. List less 35-40%		1 1/2 lb. 58c	
Wrought. "		No. 160S, per doz. \$12 25		Yankee, for Yankee Screw Drivers. 6 00		1 lb. 61c	
Wrought, bronzed. "		No. 165S, " 14 01		CHURNS.		CORD.	
Flush.		Common Plate.		Anti-Bent Wood.		Picture.	
Wrought. "		Brass Wheel. 15%		Gal. 5 7 10		White Wire. 70&10%	
Spring.		Iron and porcelain wheels, new list. 50%		Each. \$3 90 4 60 4 85		Sash.	
Wrought. "		Philadelphia Plate, new list. 50%		Belle, Barrel. 65&7 1/4%		Sampson Spot, No. 7. per doz. \$21.25	
Wrought, heavy. "		Martin's. 40%		Common Dash.		Revenor No. 7. per doz. \$14.40	
Square.		CATCHERS, GRASS.		Gal. 5 7		CORKSCREWS.	
Wrought. "		No. 160S, per doz. \$12 25		Per doz. 17 00 19 00		Walker's. 30%	
BORERS.		No. 165S, " 14 01		CLAMPS.		Williamson's Regular. 35&11 1/2%	
Angular.		Common Plate.		Adjustable.		Williamson's Forged Worm. 40%	
Miller's Falls. per doz. \$23 00		Brass Wheel. 15%		Martin's. 30%		COTTERS, SPRING.	
Sill borers, No. 51. 34 00		Iron and porcelain wheels, new list. 50%		Carpenters'. 10%		All sizes (new list) 80%	
" 52. 39 50		Philadelphia Plate, new list. 50%		Steel Bar. 10%		COUPLINGS, HOSE.	
Doz.		Martin's. 40%		CHAINS.		Brass. per doz. \$2 25	
Enterprise Mfg. Co.'s No. 1. 10%		CATCHERS, GRASS.		Breast Chains.		COVERS, WAGON—See Tents.	
No. 2. 10%		No. 160S, per doz. \$12 25		Doubleslack. doz, pairs, \$8 50		CRADLES, GRAIN.	
BOXES.		No. 165S, " 14 01		With Covert Snaps. 5 80		Morgan's Grapevine. per doz. \$45 00	
Mail, No. 2 4 10		Common Plate.		With Slide. 5 00			
Per doz. \$18 00 23 00 29 00		Brass Wheel. 15%		Without Slide. 4 60			
Mitre.		Iron and porcelain wheels, new list. 50%		Cable Coil Chains			
Goodell-Pratt. 35-40%		Philadelphia Plate, new list. 50%		Inch. 1 1 1/2			
Stanley's. Net Prices		Martin's. 40%		Per 100 lbs. 7 75 7 50 7 50			
BRACES.		CATCHERS, GRASS.					
Fray's Genuine Spofford's. 20&10%		No. 160S, per doz. \$12 25					
" No. 08. \$7 50		No. 165S, " 14 01					
" No. 010. 8 00		Common Plate.					
BRACKETS.		Brass Wheel. 15%					
Hay Rack.		Iron and porcelain wheels, new list. 50%					
Wenzelmann's No. 1, per doz. sets. \$18 00		Philadelphia Plate, new list. 50%					
Wenzelmann's No. 2, per doz. sets. 19 20		Martin's. 40%					
Shelf.		CATCHERS, GRASS.					
Wrought Steel. 40%		No. 160S, per doz. \$12 25					
		No. 165S, " 14 01					
		Common Plate.					
		Brass Wheel. 15%					
		Iron and porcelain wheels, new list. 50%					
		Philadelphia Plate, new list. 50%					
		Martin's. 40%					
		CATCHERS, GRASS.					
		No. 160S, per doz. \$12 25					
		No. 165S, " 14 01					
		Common Plate.					
		Brass Wheel. 15%					
		Iron and porcelain wheels, new list. 50%					
		Philadelphia Plate, new list. 50%					
		Martin's. 40%					
		CATCHERS, GRASS.					
		No. 160S, per doz. \$12 25					
		No. 165S, " 14 01					
		Common Plate.					
		Brass Wheel. 15%					
		Iron and porcelain wheels, new list. 50%					
		Philadelphia Plate, new list. 50%					
		Martin's. 40%					
		CATCHERS, GRASS.					
		No. 160S, per doz. \$12 25					
		No. 165S, " 14 01					
		Common Plate.					
		Brass Wheel. 15%					
		Iron and porcelain wheels, new list. 50%					
		Philadelphia Plate, new list. 50%					
		Martin's. 40%					
		CATCHERS, GRASS.					
		No. 160S, per doz. \$12 25					
		No. 165S, " 14 01					
		Common Plate.					
		Brass Wheel. 15%					
		Iron and porcelain wheels, new list. 50%					
		Philadelphia Plate, new list. 50%					
		Martin's. 40%					
		CATCHERS, GRASS.					
		No. 160S, per doz. \$12 25					
		No. 165S, " 14 01					
		Common Plate.					
		Brass Wheel. 15%					
		Iron and porcelain wheels, new list. 50%					
		Philadelphia Plate, new list. 50%					
		Martin's. 40%					
		CATCHERS, GRASS.					
		No. 160S, per doz. \$12 25					
		No. 165S, " 14 01					
		Common Plate.					
		Brass Wheel. 15%					
		Iron and porcelain wheels, new list. 50%					
		Philadelphia Plate, new list. 50%					
		Martin's. 40%					
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		No. 165S, " 14 01					
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		Brass Wheel. 15%					
		Iron and porcelain wheels, new list. 50%					
		Philadelphia Plate, new list. 50%					
		Martin's. 40%					
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		Common Plate.					
		Brass Wheel. 15%					
		Iron and porcelain wheels, new list. 50%					
		Philadelphia Plate, new list. 50%					
		Martin's. 40%					
		CATCHERS, GRASS.					
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		No. 165S, " 14 01					
		Common Plate.					
		Brass Wheel. 15%					
		Iron and porcelain wheels, new list. 50%					
		Philadelphia Plate, new list. 50%					
		Martin's. 40%					
		CATCHERS, GRASS.					
		No. 160S, per doz. \$12 25					
		No. 165S, " 14 01					
		Common Plate.					
		Brass Wheel. 15%					
		Iron and porcelain wheels, new list. 50%					
		Philadelphia Plate, new list. 50%					
		Martin's. 40%					
		CATCHERS, GRASS.					
		No. 160S, per doz. \$12 25					
		No. 165S, " 14 01					
		Common Plate.					
		Brass Wheel. 15%					
		Iron and porcelain wheels, new list. 50%					
		Philadelphia Plate, new list. 50%					
		Martin's. 40%					
		CATCHERS, GRASS.					
		No. 160S, per doz. \$12 25					
		No. 165S, " 14 01					
		Common Plate.					
		Brass Wheel. 15%					
		Iron and porcelain wheels, new list. 50%					
		Philadelphia Plate, new list. 50%					
		Martin's. 40%					
		CATCHERS, GRASS.					
		No. 160S, per doz. \$12 25					
		No. 165S, " 14 01					
		Common Plate.					
		Brass Wheel. 15%					
		Iron and porcelain wheels, new list. 50%					
		Philadelphia Plate, new list. 50%					
		Martin's. 40%					
		CATCHERS, GRASS.					
		No. 160S, per doz. \$12 25					
		No. 165S, " 14 01					
		Common Plate.					
		Brass Wheel. 15%					
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		Philadelphia Plate, new list. 50%					
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		No. 160S, per doz. \$12 25					
		No. 165S, " 14 01					
		Common Plate.					
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		CATCHERS, GRASS.					
		No. 160S, per doz. \$12 25					
		No. 165S, " 14 01					
		Common Plate.					
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		Brass Wheel. 15%					
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		CATCHERS, GRASS.					
		No. 160S, per doz. \$12 25					
		No. 165S, " 14 01					
		Common Plate.					
		Brass Wheel. 15%					
		Iron and porcelain wheels, new list. 50%					
		Philadelphia Plate, new list. 50%					
		Martin's. 40%					
		CATCHERS, GRASS.					

CRAYONS—See Chalk. CROWBARS. Pinch or Wedge Point.....per lb. 8c	ELBOWS—Conductor Pipe. Galvanized Steel, Tin and Terne, Round Corrugated.	Wood Pails. Frazer's, 15lb.\$1.00; 25 lb.\$1.50 each Hub Lightning, 15 lb. 90c; 25 lb. \$1.21 each.	HANGERS. Barn Door. U. S. Rolled Bearing.....12½% Matchless.....12½% Warehouse Tandem, No. 44.....33½%
CUTTERS Woodward.....40% Meat. Enterprise—Nos. 5 10 12 Each \$2 50 \$4 25 \$3 75 " Nos. 22 32 " 6 50 8 50	Size. Doz. 2-inch.....\$ 3 60 3-inch.....4 32 4-inch.....7 20 5-inch.....15 00 6-inch.....18 00 Subject to 60% discount.	tin Cans. Frazer's 1½ lb. per doz.....\$1 75 3 lb. per doz.....3 25	Conductor P. Iwan's Perfection.....50% Eave Trough. Imperial.....Net list Wire.....List plus 5%
Pipe. Saunders', No. 1 2 3 Each \$1 85 2 75 6 75 Slaw and Kraut. Per doz. 4-knife Kraut.....\$20 00-55 00 3-knife Kraut, 8x27 in. 13 00-18 00 1-knife Slaw.....2 50 2-knife Slaw.....3 00 Washer.....11 00	EMERY, TURKISH. Size. 5-lb pkgs. ¼ kegs. kegs. Flour.....15c 8c 7½c	GRINDSTONES. Family. Inches. 7 8 10 12 Per doz. 20 50 21 75 26 25 30 50 Loose. Per ton.....Price on application Mounted. Ball Bearing.....1 2 3 Each.....\$4 75 5 00 5 25	Garage Door. Right Angle.....50&10% Sliding Folding.....50% Receding.....50% Parlor Door. Acme.....per set, \$3 75 Ives' Improved....." 3 40 Lane's Standard....." 3 50 Lane's New Model....." 3 10 Le Roy Noiseless.....40&10% Richards.....25% Advance.....40&10%
DAMPERS, STOVE PIPE. Ideal 3".....\$1 00 4".....1 05 5".....1 15 6".....1 25 7".....2 20 8".....3 75 10".....6 00	EYES. Bright Wire Screw—See Ooods, B. W. Drifting Pick60, 10&5% Hooks and Eyes— Brass, 1¼" No. 60..per gross, \$3 50 Iron " " 50.. " 1 60	GUN WADS. (See Ammunition). GUNS. Iver Johnson Champion Single Barrel Shot Guns.....Net Prices Double Barrel, Hammerless. "	HASPS. Hinge, Wrought.....Add 50% to list. With Staples—See Staples.
DIES AND STOCKS. Discount.....New List DIGGERS. Post Hole. Eureka.....per doz. \$14 50 Iwan's Split Handle (Eureka) 4-ft. Handle.....per doz. 14 00 7-ft. " 20 00 Iwan's Perfection (Atlas) " 16 00 Iwan's Hercules pattern " 16 15 See also Augers—Post Hole. Dividers, Wing......25%	FASTENERS, STORM SASH. Shroeder's.....per doz. \$1 50 Sensible....." 3 00	HATCHETS. Crescent.....50% Cast Claw.....per doz. \$1 50@1 85 Cast Shingling....." 1 50@1 85 Germantown......7½%	HAY KNIVES. HAY RACK BRACKETS Wenzleman's No.1 per doz. sets, \$18 00 Wenzleman's No. 2 " " 19 20
DOOR CHECKS—See Checks. DOORS, SCREEN. 1-in. 4-panel, painted.....Net Prices 1½-in. 4-panel, painted....." 1½-in. 3-panel, natural pine, fancy....."	FILES AND RASPS. Delta Delta......30% Swiss.....List plus 25% Utility....." net. Nicholson's— American.....50&2½% Arcade.....50&2½% Black Diamond.....40% Eagle.....50&2½% Great Western.....50&2½% Kearney & Foot.....50&2½% McClellan.....50&2½% Nicholson.....40% J. Barton Smith.....50&2½% X-F Swiss Pattern.....List plus 10% Simonds'.....50% Disston's.....50&2½% Heller's.....60&10%	HAMMERS, HANDLED. per doz., net. Blacksmiths', Hand, No. 0, 26 oz. \$11 11 Engineers', No. 1, 26 oz. 11 11 Farriers', No. 6, 7 oz. 7 23 Machinists', No. 1, 7 oz. 6 65	HINGES. Clark's Gravity No. 1.....per doz. sets, \$2 25 No. 3....." " 5 75 Gate. Clark's.....1 2 3 Hgs & Ltch, doz. \$5 50 7 00 9 75 Hinges only " 4 75 5 50 8 00 Latches only. 1 90 1 90
DRILLS. Blacksmiths' Twist. (New List)....40% Breast. Millers Falls No. 12.....Each, \$46 00 " " 112....." 26 00 Hand. Goodell's Automatic. Nos. 01 03 Per doz. 12 00 14 40 Goodell's Single Gear, per doz. 15 75 Goodell-Pratt No. 4½ per doz. list, less.....35-40% Goodell-Pratt No. 379 per doz. list, less.....35-40% Reciprocating. Goodell's.....per doz. 26 00	FORKS. Barley. Steel, new list.....New Prices Hay. 2-tine.....New prices 3- ".....New prices 4- ".....New prices Digging.....New prices Scoop.....New prices Header. 3-tine.....New prices 4- ".....New prices Manure 4-tine.....New prices	HAMMERS, HEAVY. Heavy Hammers and Sledges. Under 5 lbs.....50% 5 lbs. and over.....50&10% Masons'. Single and Double Face.....50%	HOES. Garden.....Net
DRIVERS, SCREW. Standard.....Nets Lock Ferrule....." Champion....." Champion Pattern....." Clark's Interchangeable....." Edison....." Reed's Lightning....." Goodell's Spiral....." Yankee Ratchet....." " Spiral....."	FREEZERS—ICE CREAM. White Mountain 1-quart.....@ " " 2 ".....@ " " 4 ".....@ " " 6 ".....@ Arctic.....1 ".....@ " 2 ".....@ " 4 ".....@ " 6 ".....@ GAUGES. Cream Pail. Fairmount.....per doz. \$3 75 Marking, Mortise, etcNets Wire. Disston's.....25% Discount.....35@40%	HANDLES. Auger. Common Assorted.....per doz. \$0 75 Pratt's Adjustable, Nos. 1 & 2, per doz.....6 00 Ives' Adjustable.....per set, 1 35 Axe.....30% Chisel. Hickory, Tanged, Firmer, Assorted, 5½; Large, 85c per doz. Hickory, Socket Firmer, Assorted, 70c; Large size, 80c per doz. Coal Pick.....40% Drifting Pick.....40% File, assorted, 30c; Large, 35c per doz. Hammer. Adze Eye.....per doz. 40 to \$1 00 Blacksmiths'....." 45c@1 00 Machinists'....." 50c@1 00 Hay and Manure Fork.....25% Screw Driver. Assorted....." 6 Large....." 9 Shovel and Spade.....25%	HOOKS. Awning. No. 60.....per gro. 50% Belt. Brown's.....70&5% Jones'.....65&5% Bench. See Stops, Bench.
EAVES, TROUGH. 60% off Standard List. ELBOWS—Stove Pipe. 1-piece Corrugated, Uniform. Doz. 5-inch.....\$1 40 6-inch.....1 50 7-inch.....1 90 Uniform, Color Adjustable Doz. 5-inch.....\$1 35 6-inch.....1 45 7-inch.....1 80	GLUE. Bulk. B Amber.....per lb. 35c A White....." 40c H. S. Amber....." 32c Liquid. Army & Navy.....40% Le Page's— List "A".....37½% List "B".....33½% List "C".....25 % GREASE, AXLE. Wood Boxes. Frazer's.....per gro. \$13 00 Hub Lightning.....7 50	GIMLETS. Discount.....35@40% GLUE. Bulk. B Amber.....per lb. 35c A White....." 40c H. S. Amber....." 32c Liquid. Army & Navy.....40% Le Page's— List "A".....37½% List "B".....33½% List "C".....25 % GREASE, AXLE. Wood Boxes. Frazer's.....per gro. \$13 00 Hub Lightning.....7 50	HOLLOW WARE—See Ware.

Box.					
Inch.....	5	7	10	12	
Per doz....	\$2 50	2 75	3 25	3 85	
Bush.					
Common Axe Handle,	per doz.	\$22 00			
Chain.					
Inch..	$\frac{1}{8}$ & $\frac{1}{4}$	$\frac{3}{8}$	$\frac{7}{16}$	$\frac{1}{2}$	
Pr 100	\$7 60-8	10 9	75 11	30 12	60
Clothes Line.					
Janned.....	per doz.	48c @	1 40		
Galvanized.....	"	75c@	2 50		
Coat and Hat.					
Common Wire....	per gro.	1 25-1 65			
Conductor.					
Iwan's Tinned Sickle.....	10'				
Corn.					
Common, riveted, painted					
red.....	per doz.	Nets			
Little Giant.....	"	"			
Gate.					
See Goods, Bright Wire.					
Grass.					
Common Nos. 1	3	5	7		
Per doz....	\$4 50	3 50	3 75	3 25	
Hammock.					
With plate.....	per doz.	1 10			
With screw.....	"	1 00			
Lambrequin, or Drapery.	per gro.	30c			
Picture.....	50% @ 50%	10%			
Potato and Manure.....	Nets				
Screw.					
Brass.....	70%				
(See Goods, Bright Wire.)					
Seat Spring.....	per lb.	5½c			
HOSE, GARDEN.					
		Coupled,			
		per ft.			
Velvet,	3 ply- $\frac{1}{4}$ " guar.	press..	14c		
Eclipse	" " "	"	17½c		
Diamond	" " "	"	21c		
COTTON COV. RUBBER HOSE.					
High Grade Apache 1" guar. press.					
400 lbs.....	40c				
HUSKERS.					
Boss.					
Nos.....	B	E			
Per doz.....	New Nets				
No. 59.....	per doz.	New Nets			
IRON, PIG.					
See Metals.—First column.					
IRONS.					
Curling.					
C.....	per doz.	\$4 40			
B.....	"	50			
A.....	"	58			
Princess.....	"	1 25			
Thelma.....	"	1 25			
Pinking.....	"	1 00			
Plane.					
Wood Bench.....	Add 10% to list				
Sad.					
Charcoal.....	per doz.	\$11 00			
Common, polished, per 100 lbs.	7 75				
No. 70 Asbestos.....	\$1 50 net				
No. 100 ".....	1 75 net				
Common, nickel plated.....	8 25				
Mrs. Pott's.					
No. 50 J, Enterprise, per set,	Nets				
No. 55 J, ".....	"	"			
No. 50 T, ".....	"	"			
No. 55 T, ".....	"	"			
Tailors' Sad.....	per lb	"			
Tailors' Goose.....	"	"			
Ideal.					
6 lb. Household.....	\$3 50				
9 lb. Dressmakers'.....	4 25				
14 lb. Tailors' Goose.....	5 50				
Tuyere.					
Single Duck Nest.....	per doz.	\$5 25			
Double Duck Nest.....	"	6 25			
Sutton.....	each	2 60			
JACKS.					
Locomotive.....	30&10%				
Wagon.					
Richard's No. 1.....	per doz.	\$15 50			
Miller.....	20 00				
Oliver.					
Nos.....	0	00			
Each.....	\$0 60	20 80			

Standard, Nos.	1	2
Each.	\$0 60	1 00
R-W		
Big Lift.		40%
Tiger.		40%
KETTLES.		
Brass.		15%
Cauldron.		40&5%
Copper.	per lb.	27
Maslin.		40&10%
Sugar.		50%
KNIVES.		
<i>Beet Topping.</i>		
Clyde, 9-in. Scimitar Blade, dz.	\$3	85
California.		3 40
<i>Butcher.</i>		
Handles, 6" blade.		\$3 25
" 7"		3 75
Beechwood handles, 9" blade.		4 50
" 10"		5 25
Cooper's Hoop.		15%
<i>Corn.</i>		
Clipper.	per doz.	\$1 75
Disston's.	"	2 75
Earle's.	"	3 00
Woodford.	"	2 25
<i>Drawing.</i>		
Standard. (New List).		15%
Adjustable.		15%
Barton's Carpenters'.		15%
<i>Hay.</i>		
Iwan's Solid Socket.	doz.	\$13 00
Heath's.	"	13 00
Iwan's, Sickle Edge.	"	15 50
Iwan's, Imp'v'd Serrated.	"	15 75
<i>Hedge.</i>		
Challenge.	per doz.	\$6 00
Disston's.	"	3 75
<i>Mincing.</i>		
Common, Single.	"	60
Common, Double.	"	90
Streeter, 4-blade.	"	1 30
Streeter, 6-blade.	"	2 00
<i>Putty.</i>		
Common.	per doz.	\$0 75@1 50
Lander's.	"	1 75@2 50
<i>Scraping.</i>		
Beech Handle.		90@1 10
Lander's.		5 50@6 50
KNOBBS.		
<i>Doors.</i>		
Mineral.	per doz.	\$2 10
Porcelain.	"	2 20
Jet.	"	2 20
LADDERS.		
<i>Common Long.</i>		
Per ft.		17c@23c
<i>Extension.</i>		
Per ft.		22 to 28
<i>Step.</i>		
Common, per ft.		23c
Common, with Shelf, add 10c.		
IXL.		34c
Challenge, 6 to 9 ft.		55c
10 to 16 ft.		60c
LANTERNS.		
<i>Bull's Eye Police.</i>		
3-in. Flash Light.	per doz.	\$13 00
LEADERS, CATTLE.		
Nos.	51	52
Per doz.	\$1 35	1 45
LEATHER, LACE.		
Cut.		50%
<i>Sides.</i>		
Ex. Quality.	per sq. ft.	\$0 45
LEATHERS, PUMP.		
Valve and Plunger.		10%
LIFTERS.		
<i>Stove Coer.</i>		
Coppered.	per gro.	\$3 25@5 50
Alaska.	"	8 00
Alaska.	"	10 00
<i>Transom.</i>		
Payson's.		55%
LINES.		
<i>Chalk.</i>		
Twisted in 20-ft. hanks.		
Nos. 4 6 7 8 9		
Gro.	Prices on Application	
Twisted in 50-ft. balls.		
Nos.	1 2 3 4	
Per doz.	Prices on Application	
Braided in 20-ft. hanks.		
Nos.	0 1 2 3	
Per doz.	Prices on Application	
Mason's.	" " " "	
<i>Clothes.</i>		
60 ft. Jute.	per doz.	\$0 95
60-ft. Sisal.	"	40
50-ft. Cotton.	"	15
50-ft. Braided Cotton	"	25

LINING, STOVE.			
Bricks.....	per crate,	42c	
MACHINES.			
<i>Boring.</i>	Without Augers	With Augers	
Angular... per doz.	\$3 00	4 40	
Upright...	2 60	4 00	
<i>Leather Riveting.</i>			
Chicago, Pomeroy.... per doz.	\$9 00		
Excelsior.....	"	2 00	
Handy.....	"	2 00	
Little Giant.....	"	3 00	
Pony, Pomeroy.....	"	7 20	
MAIL BOXES.			
See Boxes.			
MALLET.			
<i>Carpenters'.</i>			
Fibre Head, No. 2, per doz.		\$16 50	
" No. 3 "		19 50	
" No. 4 "		28 50	
Round Hickory....	"	\$3 00-5 00	
" Lignumvitæ....	"	6 25-10 50	
Square Hickory....	"	3 50-5 50	
" Lignumvitæ....	"	8 00-12 00	
<i>Tinners'.</i>			
Hickory.....	"	2 25	
MATS.			
<i>Door.</i>			
National Rigid.....	50&10&5%		
Acme Steel Flexible.....	50%		
<i>Stove.</i>			
No. 2.....	per gro.	Nets	
No. 1.....	"	"	
No. 1 Asbestos Toasters, or wire-covered Stove Mats, with handle.....	per doz.	1 10	
No. 2 Asbestos Toasters, with ring.....	per doz ..	60	
MATTOCKS.			
Plumbs.....		25%	
MAULS.			
Iron, lbs.	10 13 16 18		
Per doz.....	Prices on Application		
Wood Face, lbs.	10 12 14		
Per doz.....	Prices on Application		
<i>Wood Choppers'.</i>			
Lake Super'r & Oregon Pat.	40&5%		
MEASURES.			
Galvanized, doz.....		Nets	
Japanned, doz.....		Nets	
MILLS, COFFEE.			
Enterprise.....		16 1/2%	
Parker.....		50&5%	
Arcade.....		40-10%	
MITRE BOXES.			
See Boxes.			
MOPS.			
<i>Cotton. Star (Cut Ends).</i>			
Pounds 12' 15' 18' 24'-3 oz.			
Per doz. \$4 50 5 65 6 75 9 00			
MOWERS, LAWN.			
<i>Gladiator—B. B.</i>			
Inches.....	16 18 20		
Each.....	\$6 50 7 25 8 00		
<i>King Universal—B. B.</i>			
Each.....	\$5 25 5 75 6 00		
Inches.....	14 16 18		
Big Giant.....	\$3 50 3 90 4 25		
NAILS.			
<i>Cut Steel..... Prices on Application</i>			
Cut Iron.....			
<i>Vire.</i>			
Small Lots... Prices on Application			
<i>Cement Coated.</i>			
Small Lots... Prices on Application			
<i>Horseshoe.</i>			
Asable.....		55&5%	
Capewell.....		55&5%	
Perfect.....		55&5%	
Putnam.....		20&5%	
Star.....		30&5%	
<i>Picture.</i>			
Brass Heads.....		25%	
Brads.....		50&5%	
Turniture.....		List plus 15%	

NAIL PULLERS.
See Pullers.

NAIL SETS.
See Sets.

NETTING, POULTRY.
Galvanized before weaving,....40&10%
Galvanized after weaving.....40%

NIPPERS.
End Cutting.
Stubb's Pattern, Inches. 5 6
Per dozen.....\$4 65 6 75
End and Diagonal Cutting.
Swedish Side. Inches.. 5 6
Per dozen.....\$4 50 5 75
Hoof.
Heller's.....40&10%
V. & B.....55&5%

NOZZLES.
Hose.
Magic.....per doz. \$9 50
Diamond....." 5 75

NUTS, HOT PRESSED.
Square Tapped.
\$.05 off per 100 lbs.
Hexagon Tapped.
85c off per 100 lbs.

OILERS
Chase Pattern.
Brass and Copper.....25-10%
Zinc.....35%
Engineers'.
Tin.....per doz. \$7 00@ 9 00
Machine.
Common.....per doz. \$0 85

OPENERS.
Box.
See Box Chisels
Can.
Delmonico.....per doz. \$1 30
Never Slip....." 65
Crate.
V. & B....." 7 25-11 00

OUTFITS, COBBLING
Combination.....per doz.\$16 00
Economy....." 8 50
Family....." 14 50

PAISLS.
Cream.
14-qt., without gauge,per doz. \$9 50
18-qt., " " " 11 00
20-qt., " " " 11 75
Sap.
10-qt., IC Tin.....per doz. \$4 00
12 " " " 5 50
Stock.
Galv'd. qts. 14 16 18 20
Per doz...\$9 75 10 75 12 75 14 50
Water.
Galvanized, qts.. 10 12 14
Per doz.....\$5 75 6 50 7 25
Wood.
Cable, 2-Hoop.....per doz. Nets
Cable, 3-Hoop....." Nets
Cedar, 3-Hoop,brass.. " Nets

PANS.
Dripping.....Net
Fry.
Common.....Nets
Acme....."
Roasting.
Paxton,
Nos... 1 2 3 4
Per doz.....Nets
Neverburn....."
Savory No. 200.....per doz. \$8 40

PAPER.
Building.
Plain.....per 100 lbs. $\frac{1}{2}$ price
Tarred....." $\frac{1}{2}$ price
Tarred Felt....." $\frac{1}{2}$ price
Red Rosin, 20-lb.....per roll 72c
Red Rosin, 25-lb....." 90c
Red Rosin, 30-lb....." \$1 08
and Emery.
No. 1, per ream, best grade.... \$6 00
No. 1, per ream, cheaper grade. 5 40
Wrapping.
Express.....100 lbs. Nets

PARERS.	TINNERS.	PUNCHES.	SAWS.
Apple.	Hollow.....Net list	Conductors.	Band.
Goodell's.....per doz. \$10 80	Solid.....each, 10c	No. 22.....per doz. \$3 00	E. C. Atkins & Co. Prices on applic'n
Turntable....." 11 40		Machine.....per lb. 25	Butch.
White Mountain....." 8 40		Saddlers.	Disston's.....New nets
Reading, No. 78....." 11 40		Common.....per doz. 1 50 to 5 00	Jackson's.....New nets
Potato.	PLUMBS AND LEVELS.	PUTTY.	Butchers.
Goodsell's Saratoga, 10 1/2 in., dz. 6 50	Common.....Nets	Strictly pure.....per 100 lbs. \$4 25	E. C. Atkins & Co. Prices on applic'n
Goodsell's Saratoga, 5 in., dz. 5 50	Cook's.....40%		Disston's.....New nets
	Davis' Iron.....25%	RAIL.	Circular.
	Davis' Inclinator.....15%		E. C. Atkins & Co. Prices on applic'n
		Barn Door.	Disston's.....New nets
PICKS.	POKERS, STOVE.	Matchless, 1-in.....5c	Hiles'.....New nets
Adze Eye Ore.....22 1/2%	Wr't Steel, str't or bent per doz. \$0 75	Matchless, 1 1/2-in.....7c	Simonds'.....New nets
Drifting and Poll Picks.....22 1/2%	Nickel Plated, coil han's " 1 10	Storm King.....5c	Compass.
Plumbs, Railroad.....22 1/2%		Sliding Door.	E. C. Atkins & Co. Prices on applic'n
Surface.....22 1/2%	POLISH.	Bronzed wrought iron...per ft. 8 1/2c	Common.....New nets
	Burnshine.		Disston's.....New nets
PINCERS.	1-pint.....doz. \$1 10	RAKES.	Cross-Cut.
Carpenters', cast steel.	1-pint....." 1 50	Per doz.	E. C. Atkins & Co. Prices on applic'n
Inches... 6 8 10 12	1-pint....." 2 60	Steel, Bow, 12-inch Teeth....\$8 30	Disston's.....New nets
Per doz...\$3 75 4 75 6 25 7 00	1-quart....." 5 00	Steel, Bow, 14-inch.....9 25	Simonds'.....New nets
Blacksmiths'.....45%	1-gal....." 9 00	Malleable Iron, 12-in.....4 75	Dehorning.
Heller's.....40%	1-gal....." 15 60	Malleable Iron, 14-in.....5 00	Disston's.....New nets
	Metal.		Hack.
PINS.	Wizard, 6 oz.....per gross \$17 40	Hay.	Disston's.....New nets
Clothes.	" 1 pt....." 19 20	Wood, 10 Teeth.....\$4 00	Simonds' Box Lots.....New nets
Common.....per box of 5 gro. \$0 95	" 1 qt....." 36 00	Lawn.	Hand and Rip.
Picket	" 1 qt....." 5 40	20 Teeth.....per doz. \$5 50	E. C. Atkins & Co. Prices on applic'n
Fluted, 15-in.....per doz. \$1 10	" 1 gal....." 9 60		Disston's No. 7.....New nets
Fluted, 21-in....." 1 60	" 1 gal....." 15 60	RASPS—See Files.	Disston's Nos. 8, D8, 12, 76, 112,
Spiral....." 1 90	Stove	RAZORS—SAFETY.	D100, and 120.....New nets
	Black Eagle Paste, 1-lb. cans,	Gillette.....per doz. \$45 00	Keystone.....New nets
	per gross.....\$30 00	Auto Strop....." 45 00	Disston's.....New nets
	Black Eagle Paste, 5-lb. cans,	Gem....." 8 40	Miter Box.
	per case.....4 90	Gem (3 doz. lots)....." 8 00	E. C. Atkins & Co. Prices on applic'n
	Black Jack Paste, #10, 8 oz.,	Ever Ready....." 8 40	Narrow Band.
	per gross.....11 40	Ever Ready (3 doz. lots)....." 8 00	Simonds'.....New nets
	Black Eagle Liquid, 6 oz.,		Panel.
	per gross.....13 20	RAZOR STROPS.	E. C. Atkins & Co. Prices on applic'n
PIPE.		Star (Honing).....50%	Disston's No. 7.....New nets
Standard Gauge Conductor Pipe,	FIRE POTS.	REGISTERS.	Pruning.
plain or corrugated.	Clayton & Lambert's, each \$4 00@6 00	Japanned, Bronzed & Plated.....40%	Disston's.....New nets
	Gate City.....each, 6 25	Solid Brass or Bronze Metal...Net	Rift.
	Genl.....each, \$6 75@8 50	list plus.....Prices on application	Simonds'.....New nets
		Baseboard.....40%	Wood.
	POWDER.	REGISTER FACES.	E. C. Atkins & Co. Prices on applic'n
	See Ammunition.	Japanned, Bronzed and Plated.	Common.....New nets
		4x6 to 14x14.....40%	Clover leaf.....New nets
		14x14 to 38x42.....60%	
	PRESSES, FRUIT AND JELLY.	REVOLVERS.	SAW BUCKS—See Bucks.
	Enterprise Manufacturing Co....25%	Iver Johnson Safety Automatic	SAW SETS—See Sets.
		Hammer.....New Nets	SAW TOOLS—See Tools.
		Hammerless....."	SAW FRAMES.
	PRIMERS.	L. J. Model 1900....."	Common, plain.....per doz. \$1 50
	See Ammunition.		Common painted.....2 10
	PRUNERS.	RINGS AND RINGERS.	SCALES.
	Disston's Pole.....per doz. \$18 00	Bull.	Counter.....40&10%
	Water's Improved.....60%	Copper.....2 1/2-in. 3-in.	SCISSORS.
		Per doz.....\$2 75 \$3 25	Star.....60%
	PULLERS.	Rea's Improved Self-	SCOOPS.
	Cork.	Piercing copper, doz. 3 40	Grain.....
	Daisy.....each, \$3 10	Steel, per doz.....1 50 1 80	1 bu. "Hercules".....per doz. 3 70
	Phoenix....." 1 40	Hog.	1 bu. "Hercules".....5 00
	Quick and Easy....." 2 70	Blair's Rings.....per doz. \$ 75	SCRAPERS.
	Nail.	Blair's Rings....." 1 00	Box.....
	Giant.....per doz. 14 50	Brown's Rings....." 72	Triangular, No. 6.....per doz. \$6 25
	Never-Slip....." 17 00	Brown's Rings....." 1 00	Cabinet.
		Hill's Rings....." 72	Cast Steel, Nos. 2 1/2x5 3x5 3 1/2x6
	PULLEYS.	Major Rings....." 60	Per doz.....\$1 10 1 25 1 80
	Awning—Jap'd.....10%	Perfect Rings....." 1 50	Road.
	Clothes Line.....10%	Wolverine Rings....." 1 65	Cubic ft.....7 5 3
	Hay Fork.	Wolverine Rings....." 1 10	With runners, ea.\$7 00 6 50 6 20
	Iron Wheel, 5-in.....per doz. 2 50	Fruit Jar.	SCREEN DOOR HINGES.
	Wood Wheel, 6-in....." 2 65	White.....per lb.....30c	Cast iron.....gross, \$13 00
	Wood Wheel, 6-in., pass knot,	Key.	Steel....." 9 50
per doz. 3 00	Split, round.....per doz. \$0 17	SCREWS.
	Sash.	Split, square....." 32	Iron, ins. 1 1 1/2 1 3/4 1 1/2
	Common.....Net	Ball, round....." 40	\$9 75 11 50 13 75 21 50
	Common-Sense, 2-in.....Net	RIVETS.	Wood, white maple.....per doz. 6 00
	Empire Pattern, 2-in.....Net	Copper Belt.....Add 15% to list	Hand—Wood.....35%
	Ideal.....Net	Coppered Iron.....30%	Hand Rail.....22 1/2%
	Steel.....Net	Tinners'.....30%	Jack.....30-5%
		Hama.....per lb. \$0 17	Lag or Coach—all sizes, gimlet
	PUMPS.	Slotted Clinch.....per doz. 60c@1 10	pointed.....40%
	Pitcher Spout.	Tubular.	Saw—Centennial.
	Nos.....1 2 3 4	Nos. 1 and 2 assorted sizes, 50	Nos.....1 2 3 4
	Each.....Nets	in box.....doz. 75c	Per doz.....47c 55c 75c 90c
	Spray.	Nos. 1 and 2 assorted sizes, 10	Wood.
	Midget Junior.....per doz. 3 75	in box.....doz. 1 40	F. H. Bright.....70-10-10%
	New Misty....." 6 00	RIVET SETS.	R. H. Blued.....65-10-10%
	Crescent....." 6 50	See Sets.	F. H. Jap'd.....62-10%
		ROPE.	F. H. Brass.....42-10-5%
		Cotton.....	R. H. Brass.....40-10-5%
		1/4, 5-16 in. Com. on reels, per lb. Market	R. H. Nickel Plated.....57-10%
		1/4, 5-16 in. Com. in coils. " Price	
		Sisal.....	SCYTHES.
		1st Quality.....23 1/2c	Clipper, grass.....per doz. \$13 50
		No. 2.....20 1/2c	Honest Dutchman....." 13 75
		Pure Manila.	
		1st quality, base.....per lb. 33 1/2c	
		Hardware Grade.....32 1/2c	
		RULES.	
		Hickory Board.....20%	
		Log.....20%	

SETS.		SQUARES.		TAPES, MEASURING.		WARE.	
Nail.		Steel and Iron.		Asses' Skin.		Stove Hollow Ware.	
Square head..... per doz. \$1 25		(Add, for bluing, \$3.00 per doz., net.)		Lufkin's Steel..... List Net		Plain or Unground..... 50%	
Cup point, knurled.. " 1 15		Mitre.....		Lufkin's Pocket..... 10%		Ground Ware..... 4%	
Rivet.		Try and Bevel.....		Lufkin's Metallic. List to list plus 20%		Enameled Ware..... 33 1/2%	
Farmers'..... per doz. \$2 10		Try and Miter.....		Lufkin's Pocket..... 10%		Scotch Bowls..... 60 5/8%	
Tinners'..... " 25%		Fox's..... per doz. \$6 00		THERMOMETERS.		Country Hollow Ware, per 100 lbs. \$3 00	
Saw.		Winterbottom's..... 10%		Tin Case..... per doz. 80c @ \$1 25		White Enameled Ware.	
Aiken's Pattern..... per doz. \$6 50		SQUEEZERS, LEMON.		Wood Back..... " \$2 00 @ 12 00		Maslin Kettles..... 50%	
Disston's Monarch..... " 7 20		Common Wood..... per doz. \$0 70		Glass..... " 12 00		Neverbreak Flat and Round	
Disston's X-Cut..... " 13 50		Porcelain Lined, Wood..... " 1 25		TIES.		Bottom Kettles..... 45%	
Leach's..... " 80		Boss, malleable iron..... " 1 20		Bale.....		Covered Ware	
Nash's Hand..... " 3 15		Iron frame, porc'n bowl..... " 1 90		Single Loop, carload lots..... 75 & 7%		Tin'd and Turn'd..... 35 & 10%	
Nash's X-Cut..... " 4 20		Iron Frame, glass bowl..... " 2 35		" less than car lots 70 & 15%		Enameled..... 45 & 10%	
Stillman's Lever..... " 1 30		Little Giant, tin'd iron..... " 4 00		Cow—See "Chains."		Glue Pots.	
Stillman's X-Cut..... " 2 50		Drum, japanned..... " 3 60		TOOLS, SAW.		Tinned..... Add 15% to list	
SHARPENERS, SKATE.		Drum, nickel plated..... " 4 50		Disston's Universal..... 40%		Enameled..... 30%	
Diamond..... per doz. \$1 60		STAPLES.		TRAPS.		Cherry Blossom and Chrysolite. 50%	
Perfect..... " 1 20		Blind.....		Mole.....		WASH BOARDS—See Boards.	
SHAVES, SPOKE.		Barbed..... per lb. 21 @ 22c		Reddick's..... per doz. \$9 50		WASHERS.	
Iron..... per doz. \$1 10 @ 1 85		Butter Tub..... " 16 @ 19c		Game with Chains.		Standard O. G. cast iron..... per lb. 3 1/2	
Wood..... " 2 75 @ 4 75		Fence—		Victor No. 1..... \$1 65		Wrought steel in 5-lb. boxes, per lb.: 1	
Stanley's..... Nets		Polished..... per 100 lbs. \$5 45		Oneida Jump No. 1..... 2 25		In. 3/16 1/2 5/16 1/2 1/2 1/2 1/2 1/2	
SHEARS.		Galvanized..... 6 15		Newhouse No. 1..... 3 85		18c 16c 15c 13c 12c 11c 11c 11c	
Pruning.		Netting.		Mouse and Rat.		WEDGES.	
Buckeye, No. 1..... per doz. \$5 75		Galvanized..... per 100 lbs. 6 50		Out O'Sight Mouse..... \$8 00		Ax..... per doz. Nets	
Buckeye, No. 2..... " 7 40		Wrought.		" Rat..... 15 00		Galling..... per lb. " 8 1/2	
California Pat., 9-in..... " 3 20		Wrought Staples, Hasps and		" Mole..... 100 00		Saw.....	
California Pat., 10-in..... " 4 00		Staples, Hasps, Hooks and		#44 Pocket Gopher..... 20 00		WEANERS.	
Draw Cut, No. 3..... " 13 75		Staples, and Hooks and		Victor Mouse..... 2 60		Calf.	
Draw Cut, No. 4..... " 16 50		Staples..... 50 & 10%		Hold Fast Mouse..... 2 60		Fuller's, per doz. \$2 00 to \$2 50	
Henry's Pat 01..... 14 012		Extra heavy..... 35%		Victor Rat..... 11 00		Tyler's Safety, per doz. 1 85 to 2 40	
Per doz..... \$1 40 2 10 2 90 2 80		STEELYARD.		Hold Fast Rat..... 11 00		Carroll's, per doz. 3 00 to 3 75	
Star..... per doz. \$4 00		Discount 25%.		Official Rat..... 13 50		Hoosier, per doz. 3 50 to 4 60	
Sheep—No. BBA,		STONES.		Wood Choker Mouse, 4 Holes 11 00		Shaw Perfected..... 3 00 to 3 75	
Inches..... 6 6 1/2 7		Axe.		TROWELS.		WEIGHTS.	
Reg. Grip..... \$11 25 11 50 12 00		Hindustan..... per lb. New Nets		Brick.		Hitching..... per lb. Nets	
Nar. Grip, doz..... 11 00 11 25 12 25		More Crit..... " "		Clover Leaf..... 30%		Sash—f.o.b. Chicago	
Star..... 60%		Washita..... " "		Brade's..... 15 & 5%		Ton lots, per ton..... \$52 00	
Tinners'—See Snips.		Emery.		Disston's..... 30%		Smaller lots, per ton..... 54 00	
SHEAVES, SLIDING DOOR.		No. 126..... per doz. New Nets		Plasterers.		WHEEL BARROWS.	
Common.		Oil—Mounted.		Clover Leaf..... 40%		No. 4 Tubular Steel..... @ \$8 00	
Inches..... 3 4 5		Arkansas Hard No. 7 per doz. New Nets		Disston's..... 25%		Common Tray or Stave Tray @ 2 50	
Per set..... \$1 40 1 75 2 40		Arkansas Soft..... " "		W. & McP..... Net		Angle leg, garden..... @ 4 50	
Hatfield's.		Washita No. 717..... " "		TRUCKS.		WHEELS.	
Per set..... \$1 80 2 10 2 75 4 25		Oil—Unmounted.		Bag..... each, \$3 75		Carborundum..... 50%	
SHELLS—See Ammunition.		Arkansas Hard..... per lb. New Nets		Warehouse or store.		Emery..... 60%	
SHELLERS, CORN.		Arkansas Soft..... " "		No..... 1 2 3		Well, Ins..... 8 10 12	
Union..... per doz. \$6 75		Lily White..... " "		Half Ironed..... \$5 00 6 50 9 40		Per doz..... \$5 50 7 25 8 50	
SHIELDS.		Queer Creek..... " "		Full Ironed..... 5 75 7 50 11 00		12 in. heavy hoisting, per doz. \$25 00	
Expansion Bolt Shields..... 60%		Washita..... " "		TUBS, WASH.		WIRE.	
SHOES.		Scythe.		Standard, Wood..... Ex.		Brass.	
Conductor..... 60%		Black Diamond..... per gro. New Nets		Nos..... 3 2 1 large		In coils..... Nets	
SHOT—See Ammunition.		Crescent..... " "		Per doz..... \$9 50 11 25 12 75 15 50		In 1-lb. spools, new list..... Nets	
SHOVELS AND SPADES.		Green Mountain..... " "		Galvanized.		Broom—Tinned..... Nets	
Coal.		LaMoille..... " "		No..... 1 2 3		Cable—Same price as Barbed Wire.	
No. 2, Woodford..... per doz. \$5 50		Extra Quinnesbog..... " "		Per doz..... 15 20 13 25 20 00		Copper.	
No. 182..... " 6 00		Red End..... " "		TWINE.		In coils..... Nets	
Ames', new list..... Discount, 12 1/2%		Hotchkiss'..... per doz. New Nets		3-ply Cotton Wrapping.....		1-lb. spools, new list..... Nets	
Neverbreak, hollow bck, blk..... Nets		Stearns'..... " "		Extra Wrapping.....		Fence—Smooth..... An'eal'd Galv'd	
National..... " "		STOPPERS, FLUE.		" Hyv. Wrapping.....		Nos. 6 to 9, less than	
Buckeye..... " "		Common..... per doz. \$1 10		" Wrapping on tubes.....		car, per 100 lbs. \$4 25 & 4 95	
Mohawk..... " "		Gem, flat, No. 3..... " 1 00		" cones.....		Hair—New List..... 40 & 10%	
Bar Drain & Ditching		Gem, No. 1..... " 1 10		India Hemp, 1/4-lb. balls, No. 18.....		Market.	
Iwan's Perfection..... \$30 00		STOVE PIPE—See pipe.		2-ply Jute, 1-lb. balls.....		Market Quotations	
Railroad, etc.		STOVE BOARDS—See Boards.		Seins.		Bright, full bdes..... "	
Black Diamond..... per doz. Net		STOVE POLISH—See Polish.		Soft..... per lb. Market		Bright, broken bdes..... "	
Crescent..... " "		STRAPS.		Med..... " Quotation		Coppered, full bdes..... "	
Keystone..... " "		Shate..... per doz. 85c & 1 20		Hard..... " "		Coppered, broken bdes..... "	
Star..... " "		STRETCHERS.		Staging, 1/4-lb. ball, size 21.....		Tinned, full bdes..... "	
Hollow Back..... " "		Bullard's..... per doz. \$3 90		" " " 24.....		Tinned, broken bdes..... "	
Ames', new list..... Discount, 12 1/2%		Excelsior..... " 5 25		" " " 27.....		Picture—In coils..... 80% @ 80 & 10%	
Snow.		Malleable Iron..... " 70		Bagging, 1/4-lb. ball.....		In 5-lb. spools..... per lb. 26c	
Galvanized, with wood han-		Perfection..... " 6 30		3-ply, "B" in hanks.....		WRENCHES.	
dle, No. 56..... \$1 45		King..... " 4 50		4- " " " ".....		Acme Standard..... 50 & 10%	
No. 55..... 1 55		Wire.		3- " " " ".....		Alligator No. 1..... 90c net	
Alaska Steel.		O. S. Elwood, No. 1..... per doz. Nets		3- " " " ".....		Always Ready..... 30%	
D-Handle..... per doz. \$3 50		O. S. Elwood, No. 2..... " "		3- " " " ".....		Agricultural..... 50 & 5%	
Long Handle..... " 3 00		SWIVELS.		3- " " " ".....		Ellis Adjustable..... 25%	
SINKS.		Malleable Iron..... per lb. \$0 10		3- " " " ".....		Malleable "S"..... per lb. 08c	
Cast Iron.		Wrought Steel..... per gro. 4 50		3- " " " ".....		Stillson Pipe..... 60%	
Painted, 16x24..... Net		TACKS.		3- " " " ".....		Bemis & Call's:	
Enameled, White, 16x24.....		Bill Posters' 6-oz., 25 lb. boxes,		3- " " " ".....		Adjustable S, 15%; Adjustable S	
Wrought Steel.		per lb. 19c		3- " " " ".....		Pipe, 15%; Briggs' Pattern, 10%	
Painted, 16x24.....		Upholsters' 6-oz., 25-lb. boxes,		3- " " " ".....		Combination Bright..... 20%	
SLEDGES—See Hammers.		per lb. 20c		3- " " " ".....		Steel Handle Nut..... 20%	
SNAPS, HARNESS.		SWIVELS.		3- " " " ".....		Combination Black..... 20%	
Covered Spring..... Add 30%		Malleable Iron..... per lb. \$0 10		3- " " " ".....		Merrick Pattern..... 20%	
Judd's Pattern..... Add 3 1/4% to list		Wrought Steel..... per gro. 4 50		3- " " " ".....		Knife Handle Pattern.	
SNATHS.		TACKS.		3- " " " ".....		No. 62, Screw Wrench, List, plus 5%	
Double Ring, Bush..... per doz. \$9 75		Bill Posters' 6-oz., 25 lb. boxes,		3- " " " ".....		No. 60, Steel Handle..	
Patent Loop, Bush..... " 10 00		per lb. 19c		3- " " " ".....		WRINGERS.	
Patent Loop, Grass..... " 8 75		Upholsters' 6-oz., 25-lb. boxes,		3- " " " ".....		No. 790, Guarantee..... per doz. \$58 00	
SNIPS, TINNERS'.		per lb. 20c		3- " " " ".....		No. 770, Bicycle..... " 54 00	
Clover Leaf..... 40 & 10%		TACKS.		3- " " " ".....		No. 110, Domestic..... " 47 50	
National..... 40 & 10%		Bill Posters' 6-oz., 25 lb. boxes,		3- " " " ".....		No. 110, Brighton..... " 43 50	
Star..... 50%		per lb. 19c		3- " " " ".....		No. 740, Bicycle..... " 54 00	
SOLDER—See Metals.		Upholsters' 6-oz., 25-lb. boxes,		3- " " " ".....		No. 22, Domestic..... " 47 50	
SPRINGS, DOOR.		per lb. 20c		3- " " " ".....		No. 22, Pioneer..... " 43 50	
Perfect.		TACKS.		3- " " " ".....		No. 770B, Bicycle..... " 82 00	
Nos..... 2 3 4 5 6 7		Bill Posters' 6-oz., 25 lb. boxes,		3- " " " ".....		No. 781B Guarantee..... " 91 00	
Per doz. 55c 60c 65c 75c 90c 1 00		per lb. 19c		3- " " " ".....			
Reliance.		Upholsters' 6-oz., 25-lb. boxes,		3- " " " ".....			
Light Medium Heavy		per lb. 20c		3- " " " ".....			
Per doz. \$1 55 2 10 3 20		per lb. 20c		3- " " " ".....			
Torrey's..... per doz. 1 65		per lb. 20c		3- " " " ".....			

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Rasps. Delta File Works, Philadelphia, Pa. Disston & Sons, Inc., Henry, Philadelphia, Pa. Heller Bros. Co., Newark, New Jersey. Nicholson File Co., Providence, Rhode Island.	Sheets—Planished. Sykes Co., The, Chicago, Ill.	Tapes. Lufkin Rule Co., Saginaw, Mich.	Wrenches. Bemis & Call Hdw. & Tool Co., Springfield, Mass.
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Repairs—Furnace. Omaha Stove Repair Works, Omaha, Nebr.	Sifters—Ash. Diener Mfg. Co., G. W., Chicago, Ill.	Tin—Perforated. Harrington & King Perforating Co., Chicago, Ill.	
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¶ ADVERTISING is the power of an idea multiplied.

¶ Other powers lose by expansion. Steam is power only when confined. Electricity radiated and diffused becomes nothing. Sound dies with distance. Great suns pale into invisible stars, and the power of light itself is lost in infinite space. But the strange power of advertising increases by expansion. Diffusion is its life. It grows by what it imparts.

¶ The advertised idea, to become a power, must be genuine, vital, and related to the function of a meritorious business; and the means of its furtherance must be well chosen.

¶ To choose well the means for the furtherance of your advertised idea, in order that it may become a power, in order that you may show its genuineness as a vital factor of your business, is not hard.

¶ A close perusal from cover to cover of this week's issue of AMERICAN ARTISAN AND HARDWARE RECORD will disclose abundant evidence of this fact.

WANTS AND SALES

For paid yearly subscribers, **AMERICAN ARTISAN AND HARDWARE RECORD** will insert under this head advertisements of not more than fifty words **WITHOUT CHARGE**. Employers wishing to secure employes, parties desiring to purchase or sell business, secure partners or to exchange, etc., will find that these pages offer excellent opportunities to satisfy their wants. Clerks and tinsmiths looking for situations will find it to their advantage to use these columns. Those who respond to these announcements please mention that they "READ THE ADVERTISEMENT IN AMERICAN ARTISAN AND HARDWARE RECORD."

BUSINESS CHANCES

Wanted—To hear from owner of good hardware store for sale. State cash price and particulars. Address D. F. Bush, Minneapolis, Minnesota. 9-1t

For Sale—Stock of hardware, paint and stoves in northern Iowa. Good farming country. Invoice of stock, \$5,000. Must sell at once, as I have good reasons for selling. Address H. H. Furst, Germania, Iowa. 8-3t

For Sale—A good clean stock of hardware and farm implements in good farming country. Stock invoices about \$4,000. New brick building, size 24x80, with basement below, size 34x80. No competition. Ill health is reason for selling. J. F. Wolf, McNabb, Illinois. 9-3t

For Sale—Plumbing and sheet metal business. Good opening. Only one other shop. Population 2,100. Good country. Plenty of work. Will sacrifice and make it an object to you. Reason for selling, am alone and alone in years. For further information write to Wm. H. Miller, Plano, Illinois. 9-3t

For Sale—Hardware stock, \$7,000, in Michigan. Best location in city. Some manufacturing. Good farming country. Large territory. Good price competition. Will sell right if sold soon. Address A-38, care of AMERICAN ARTISAN AND HARDWARE RECORD, 620 South Michigan Boulevard, Chicago, Illinois. 7-3t

Wanted—A partner for an established tin and sheet metal shop doing cornice, skylight, ventilating, blow pipe and general sheet metal work in a well equipped shop in a city of Pennsylvania. A small amount of capital required. Address A-44, care of AMERICAN ARTISAN AND HARDWARE RECORD, 620 South Michigan Boulevard, Chicago, Illinois. 7-3t

For Sale—A good, clean and up-to-date stock of hardware and farm implements. Located in the best farming community in Central Illinois. Town of 1,100 population. Reason for selling, advanced years and poor health. Address replies to A-40, care of AMERICAN ARTISAN AND HARDWARE RECORD, 620 South Michigan Boulevard, Chicago, Illinois. 7-3t

For Sale—Clean stock of hardware in city of 3,000. A good paying business, established over 21 years. Fine location. Two-story building with basement 33x70. Will either sell or rent. Large established trade in best diversified farming country. Tinning and plumbing in connection. County seat on terminal of two railroads. Stock will be reduced to suit purchaser. One of the best trading centers in the state. No trade considered. Ill health reason for selling. Address Kuebler Hardware, Viroqua, Wis. 8-3t

For Sale—In a good clean Nebraska town, a new brick hardware store building and stock, located on one of the best corner lots on Main Street. Lot 50x140 ft.; building 30x90 ft.; with 9 ft. cemented basement for shop and storage, with elevator revolving nail bins. Furnace and electric lights. All fixtures are up-to-date. Will sell building, fixtures and stock, or sell building and fixtures separately. The business has been established thirty years. The best reason for selling. Kindly address replies to A-43, care of AMERICAN ARTISAN AND HARDWARE RECORD, 620 South Michigan Boulevard, Chicago, Illinois. 7-3t

HELP WANTED

Wanted at Once—A good all around tinner and furnace man, one who is able to do some country plumbing. Steady job and good wages. Treckers and Phillips, Odell, Illinois. 8-ufn

Wanted—First-class plumber, one having some experience in sheet metal work preferred. Steady job. Address A-50, care of AMERICAN ARTISAN AND HARDWARE RECORD, 620 South Michigan Boulevard, Chicago, Illinois. 8-3t

Wanted—Good bookkeeper and stenographer at once. Prefer lady. State age, experience and salary expected. Write A-52, care of AMERICAN ARTISAN AND HARDWARE RECORD, 610 South Michigan Boulevard, Chicago, Illinois. 9-3t

Wanted—One first-class tinner for hotel and shop work, and one first-class furnace man. Address all replies to A-42, care of AMERICAN ARTISAN AND HARDWARE RECORD, 620 South Michigan Boulevard, Chicago, Illinois. 7-3t

Wanted—A first-class tinner who can do plumbing. Must be able to do a good job and capable of holding state license. To a first-class man I have a steady job the year around. State wages wanted. Frank R. Jarrell, West Market Street, Hoopston, Illinois. 7-3t

Wanted at Once—An all around tinner and furnace man capable of doing high grade work. Good wages paid. Steady work the year around. Good city. State wages and experience. Must be strictly sober. The E. C. Boorn Company, 20 East Franklin Street, Warren, Ohio. 7-3t

Wanted Soon—An A1 tinner, plumber and steam fitter. A hustler, one who can lay out his own work and install it right. No boozers wanted. Give age, whether married or single, in first letter. A good steady job for the right man. Address Lock Box 54, Clarksville, Iowa. 7-3t

Wanted at Once—Two first-class tinner and furnace men. Must be reliable and of good habits. Eight hour day. Good wages. Please address replies to B-41, care of AMERICAN ARTISAN AND HARDWARE RECORD, 620 South Michigan Boulevard, Chicago, Illinois. 7-3t

Wanted at Once—An all around tinner and furnace man capable of doing roofing work. Steady work the year around. City of 6,000 population. State wages and experience. Must be strictly sober. Address A-47, care of AMERICAN ARTISAN AND HARDWARE RECORD, 620 South Michigan Boulevard, Chicago, Illinois. 8-3t

Wanted—Tinner, one who can do most any kind of sheet metal work that comes into country town shop; also dust pipe work. Have up-to-date shop and plenty of work the year around for three or four men. State experience and wages wanted in first letter. J. R. Everroad, Columbus, Indiana. 9-3t

Wanted—First-class plumber, tinner and hot air furnace man who understands insulation of vacuum heating plant. State age, experience and salary expected. Please address replies to A-52, care of AMERICAN ARTISAN AND HARDWARE RECORD, 620 South Michigan Boulevard, Chicago, Illinois. 9-3t

Wanted—Plumber who can do hot air, hot water and steam heating. A good steady job for the right man the year around. Must be sober. State particulars and wages wanted in first letter. Address A-51, care of AMERICAN ARTISAN AND HARDWARE RECORD, 620 South Michigan Boulevard, Chicago, Illinois. 8-3t

Wanted—Two fine territories in the corn belt open for high class salesmen. Heating experience desirable but not essential. Very fine chance for high grade men. Kindly address A-48, care of AMERICAN ARTISAN AND HARDWARE RECORD, 620 South Michigan Boulevard, Chicago, Illinois. 8-3t

Wanted—A good hardware clerk March 1st. Married man preferred. Must be a good salesman and no booze fighter. Steady job for right man. \$25.00 per week. State age and number of years in the business. Please address A-45, care of AMERICAN ARTISAN AND HARDWARE RECORD, 620 South Michigan Boulevard, Chicago, Illinois. 8-3t

Wanted—Three furnace men and plumbers. Must be capable of taking charge of a shop in town of from two to three thousand. Also two furnace men capable of taking charge of shops in towns of three thousand. State wages expected, age and experience, in first letter. Address A-39, care of AMERICAN ARTISAN AND HARDWARE RECORD, 620 South Michigan Boulevard, Chicago, Illinois. 7-3t

HELP WANTED

Wanted—Good plumber. Steady job. State wages in first letter. Malvern Metal Works, Malvern, Arkansas. 7-3t

Wanted—An A1 tinner, plumber and steam fitter. A good steady job at good wages for the right man. Address 130 West Main Street, Montpelier, Ohio. 9-3t

Wanted—A good all around hardware man. If you understand the business, can make good and work, I want you. \$25.00 per week. E. W. Lowell, Janesville, Wisconsin. 9-3t

Wanted—An all around man who can do some plumbing, furnace, pump, tin work and windmill repairing. State age, experience and wages in first letter. M. B. Lund, Hollandale, Wisconsin. 7-3t

Wanted—An all around plumber and tinner who can do hot air, steam and hot water heating. Steady employment the year around. Give full particulars and wages expected in first letter. H. E. Flesher, Lexington, Illinois. 8-3t

Wanted—A first-class sheet metal worker, plumber, hot water, steam and warm air heating man. Married man preferred. No boozers. Work at once and steady. A. L. Spradling, 218 East Main Street, Hoopston, Illinois. 7-3t

Wanted—We have a first-class job in a first-class country town for a first-class tinner, furnace man and plumber. Good wages. Steady job. Want a man to begin work March 1st. Prefer a married man. J. R. Jamison, Shell Rock, Iowa. 8-3t

SITUATION WANTED.

Situation Wanted—By an experienced sheet metal products salesman. Ohio or Indiana territory preferred. Address J. M. R., 1761 West 2nd Street, Dayton, Ohio. 8-3t

Situation Wanted—By experienced hardware man capable of managing business. Prefer location in Illinois. Address A-46, care of AMERICAN ARTISAN AND HARDWARE RECORD, 620 South Michigan Boulevard, Chicago, Illinois. 8-3t

Situation wanted by a first-class sheet metal worker and furnace setter. Have had 23 years' experience. Am married and sober. Wages \$25 per week. Prefer a small town in Wisconsin, Illinois or Iowa. Address Bert J. Hawkins, 813 East Fourth Avenue, Flint, Michigan. 8-3t

Situation Wanted—By tinner and furnace man. Have had seven years' experience. Sober and reliable. Single. Must be steady job. State wages in first letter. Can come at once. Address A-49, care of AMERICAN ARTISAN AND HARDWARE RECORD, 620 South Michigan Boulevard, Chicago, Ill. 8-3t

TINNERS' TOOLS

For Sale—One 35-light and one 50-light brand new pilot acetylene light plants. Arnin Aberlin, Hermann, Missouri. 7-3t

For Sale—Two oak counters 20 ft. long by 27 inches wide. Excellent condition. Address Fey and Fey, Delavan, Wisconsin. 9-3t

Wanted—8 or 10 foot cornice brake; also small air compressor. Machines must be in good condition and price reasonable. Wm. Kulck, 662 Middle Street, Kenosha, Wisconsin. 7-3t

For Sale—We have about 92 lbs. of 2½ lb. tinned tinner's rivets and about 50 lbs. tinned riveting burrs to fit same, in bulk. Make offer for same. Young Hardware Company, Bellevue, Iowa. 7-3t

For Sale—One No. 31 20" stove pipe formers; one No. 656 Olmstead double seaming machine, complete; one No. 1 and No. 2 Sanders pipe cutters. These machines and tools are all in good condition and will dispose of same reasonably. All or separate to suit purchaser. Address A. J. Schultz, Postville, Iowa. 9-3t

For Sale—One 8-ft. wood truss brake, fine condition; one 30-in. bar folder; one 30-in. square shear; one 30x2-in. rolls; one No. 6 beading machine; one large burring machine; one large turning machine; one hollow mandrell; one square head stake. All in A1 condition and the job lot for \$150.00. Please address reply to A-31, care of AMERICAN ARTISAN AND HARDWARE RECORD, 620 South Michigan Boulevard, Chicago, Illinois. 7-3t